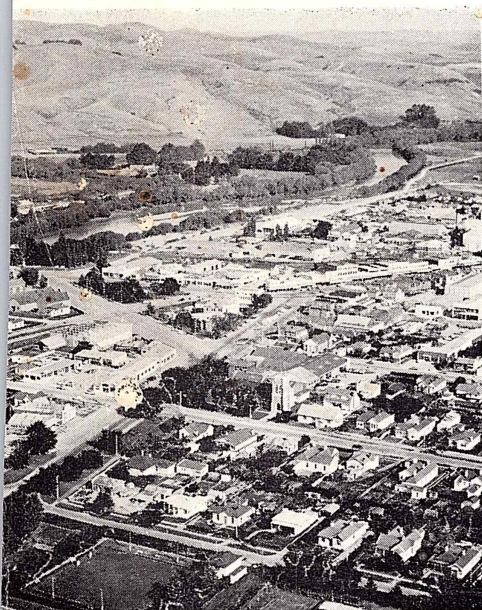


SOUTHLAND



1966

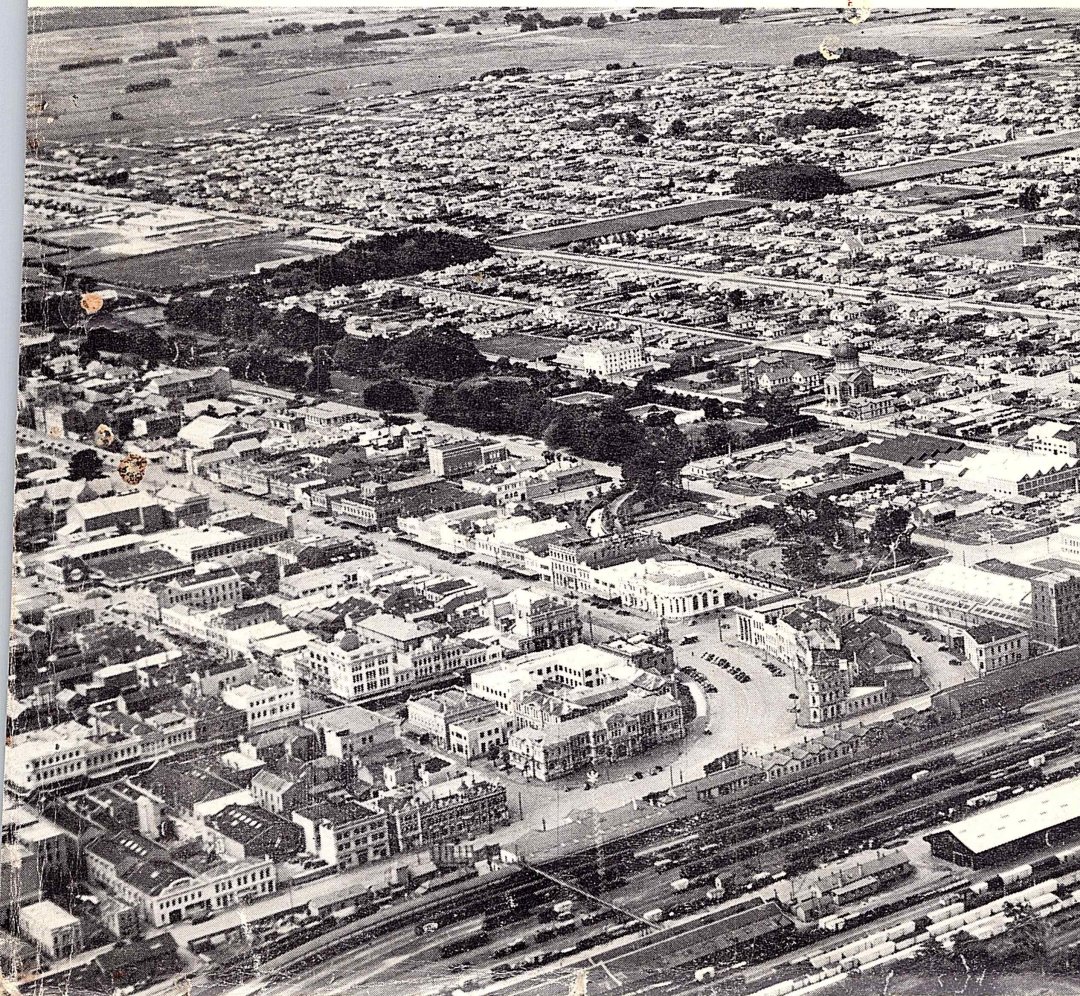
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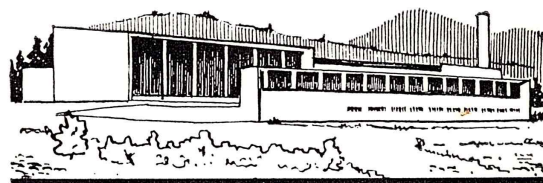
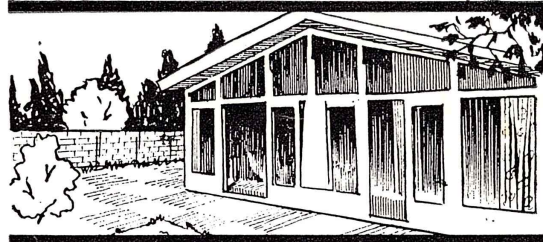
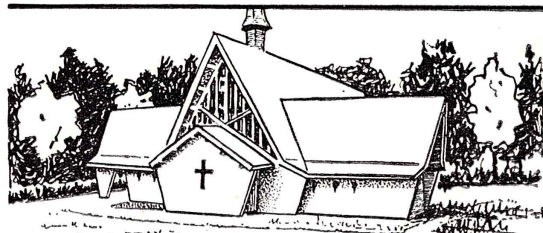
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SOUTHLAND

August, 1966

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SOUTHLAND PROVINCE

Some Facts and Figures

SOUTHLAND has long been regarded as one of New Zealand's most important agricultural areas, however with the development of the great natural water resources for hydro-electric power, it has become obvious that there is also a vast potential for industry.

Apart from the availability of hydro-electricity there are many other factors favouring industrial development in this region. Deposits of raw materials provide a sound basis for industry. These include limestone, marble, clays, quartz and sand gravel, oil shale, coal and various types of ores.

A fast, efficient transport system gives ready access to local markets, in both the North and South Islands, and good overseas shipping services link Southland with overseas markets for both imported and exported goods.

Southland's pastoral economy has given rise to the establishment of allied industries such as freezing works, wool-len mills, dairy factories, paper mills and flour mills. Vast native forests of rimu and silver beech have given rise to timber milling industries and a continual programme of planting is carried out to replace felled trees.

The population of Southland has increased steadily, and last year's estimate totalled 101,000.

Population figures for the main centres are:

Invercargill	43,500
Gore	8,100
Bluff	3,160
Mataura	2,650
Winton	1,750
Riverton	1,300

CLIMATE

Climatically, Southland is divided into three main regions — the mountain areas of Fiordland, the high country to the east of the main ranges, and the lowlands and coastal areas. The average rainfall over most of Southland is between 35-45 inches, although at Milford Sound it exceeds 250 inches

per year. The reliability of the rainfall ensures that there is seldom any shortage of water or reduction in river flow.

Sunshine hours average between 1600 and 1750 hours per annum. Because of the prevailing south and south-westerly winds, problems arising out of industrial fumes and smoke are eliminated.

LABOUR

THERE is no surplus labour supply in Southland, but this has not prevented the successful completion of many construction projects, and little or no time has been lost through industrial disputes or disturbances. The total labour force numbers about 34,600 — 28,300 men and 6300 women.

With the establishment of new industries smaller numbers of the young labour force will be forced to leave their own districts to seek work in other centres. Concerns intending to establish industries in Southland would find local labour supplies sufficient, although they should endeavour to provide workers for key positions in skilled trades.

COAL

SOUTHLAND is rich in sub-bituminous coal and lignite, in fact about one-third of New Zealand's lignite lies within this province. The most productive of the coalfields is the Ohai field, 50 miles north-west of Invercargill. It covers an area of some 35 square miles, and produces 287,000 tons of sub-bituminous coal annually. The quantities available are 15,000,000 tons (measured), 75,000,000 tons (indicated) and 100,000,000 tons (inferred).

The coal mined from this field has a low content of ash and sulphur and is non-coking.

The second important coalfield in Southland is the Mataura field, which covers the whole of the Mataura Valley extending from Gore to the sea — a total of 650 square miles. This field produces about 71,000 tons per annum of lignite. The quantities of coal available are 5,000,000 tons (measured),

20,000,000 tons (indicated), and 152,000,000 tons (inferred). Mataura lignites, like the Ohai coal, a low ash and sulphur content.

The total production of all coalfields averages about 363,000 tons annually, but this could be increased to meet further industrial and domestic demands.

ELECTRIC POWER

SOUTHLAND possesses great potential for the development of hydro-electric power, but as yet it has barely been touched. A conservative estimate has shown that this potential measures about 5 million kilowatts, but it is known to be greatly in excess of that figure.

To encourage industries to tap this vast potential, the Government has granted exclusive rights to an overseas combine to develop the Manapouri-Te Anau lake system for an aluminium smelting industry. The potential of this area is estimated to be some 600,000 kilowatts. The Government has also planned a programme of development to provide electricity for both domestic and industrial demands.

The only existing power station in Southland is at Monowai, and its output of 6000 kilowatts is fed into the South Island grid. A huge hydro-electric scheme at Lake Manapouri is being developed also. The lake covers an area of 55 square miles, and the volume of discharge (cusecs) measures 13,630. The drainage area is 1785 square miles.

Other natural water resources in the area are:

Lake Te Anau — area 136 square miles; drainage area 1275 square miles; volume of discharge (cusecs) 9730.

Lake Hauroko — area 27½ square miles; drainage area 225 square miles; volume of discharge (cusecs) 495.

Lake Poteriteri — area 18 square miles; drainage area 160 square miles; volume of discharge (cusecs) 1050.

From these figures it is obvious how great is the potential for hydro-electric development.

All centres of population are fully serviced by the rapidly enlarging reticulation. The maximum demand in Southland is at present in excess of 42,000 kilowatts, and a new volt line from Roxburgh has recently been completed.

Charges under the Southland Electric Power Supply are as follows:

Commercial, Industrial and General Supply:

2½d per unit plus a monthly fixed charge of 10s.

Large Industrial Supply:

Special rates to large industries guaranteeing an annual revenue of £600 for a period of two years — £1 per kilowatt per month of maximum demand plus 0.8d per unit.

Domestic and Farm Supply:

1.8d per unit plus a monthly fixed charge of 7s 6d.

Waterheating Supply:

Restricted supply with thermostat ½d per unit. Unrestricted supply with thermostat 1.2d per unit.

In the Invercargill city area the charges are:

Industrial Supply: A special rate to be introduced in the near future.

General Supply: Fixed charge 6s 6d; first 60 units at 5d per unit; next 1440 units at 3.35d per unit; next 1500 units at 2d per unit; thereafter at 1.7d per unit; special off-peak supply at .75d per unit.

Gas

Gas supplies are available in the Invercargill City area at a fixed charge of 6d per meter. The contract rate for 20,000-45,000 cu. ft. is 12s 6d per 1000 cu. ft.; and thereafter 11d per 1000 cu. ft.

RAIL DISTANCES

Rail distances from Invercargill to terminal points in the province are as follows:

to Bluff	17 miles
to Kingston	87 miles
to Mossburn	61 miles
(branch at Lumsden)	
to Orawia	64 miles
to Wairio	42 miles
(branch at Thornbury)	
to Tokonui	34 miles
to Wyndham	27 miles
(branch at Edendale)	
to Waikaka	55 miles
(branch at McNab)	
to Browns	24 miles
(branch at Winton)	

LAND for INDUSTRY

SOUTHLAND and Invercargill have virtually unlimited potential for the establishment of new industries. Local bodies in all areas have given their support to new industrial ventures, and for large-scale industries the Government has offered every encouragement.

Land is available in Invercargill on a freehold or leasehold basis. The reclamation of the Waihopai estuary has provided sites for heavy industry and covers about 25 acres in all. A further 16 acres will be available within the next two years. This land is adjacent to railway sidings and is less than two miles from the Invercargill Airport. These sites are priced at £7000 per acre for one or more acres, or £2000 per quarter acre.

In the central-eastern part of the city 5 acres is immediately available for light industry. This is bisected by the main trunk railway line for transport purposes. A further 20 acres is free for development as required, all sections being fully serviced.

Adjacent to the main north highway near the city's northern boundary, 50 acres of land has been set aside for industrial development. Fully serviced sections in this block vary in size from 34 poles to 4 acres.

Rating: per £100 of Government value £3 6s 10d. Per £100 on present value £2 4s 6d.

Houses are available, mainly for purchase although there are some for rental. Sections are priced between £400 and £1000. Building costs average about £2 10s per square foot.

In Southland County between Invercargill and Bluff lies an area of reasonably low-priced land for heavy industry. This land is close to a Class I highway and a railway, and rail access and water supply may be arranged by negotiation. Although this land is flat it is relatively unsuitable for farming purposes.

Other areas available in this county are adjacent to the centres of Gore, Edendale, Maitara, Wyndham, Winton, Bluff and Lumsden.

Land for industrial development is available adjacent to each of the townships in the Wallace County. This land is generally flat and may be readily subdivided and serviced. Land adjacent to the townships should not exceed the cost of £200 per acre, or £250 within

the townships themselves, except in special localities.

There is particularly good opportunity for new industries in the vicinity of the Ohai mining centre and the Tautapere sawmilling area. The present all-inclusive rate is £6 18s 8d per £1000 of capital value, and building costs range from £1 10s per square foot according to type.

South of Gore the Maitara Valley offers many openings for industry with the abundant water supply from the Maitara River, and almost unlimited supplies of cheap lignite. Industries already established in this area include a paper mill, freezing works and dairy factory.

Industrial land within the Gore Borough falls into two categories, the first of which is the quarter acre allotments in established industrial zones. The size of these allotments somewhat limits their industrial potential as far as large industries are concerned, but they are extremely suitable for the smaller type of service industry. The land is centrally situated near a railway goods service and is supplied with full borough services.

The second group covers the industrial complex south of Gore, 41 acres of which is available for industrial purposes. Sixteen acres are owned by the Railways Department and may be leased. The remaining 25 acres have been acquired by the Gore Borough Council. This land will be serviced by newly constructed streets with full Borough services.

The area is close to the fast-developing West Gore residential area with schools, recreational and commercial facilities.

Water is supplied at the rate of 2s 6d per 1000 gallons, although special rates for bulk users may be negotiated with the Borough Council. Land costs are about £1200 per acre with full services. The quarter acre allotments sell at £1000 and £700 freehold and leasehold respectively.

In the Borough of Bluff the most desirable land sites are on the reclaimed land of the foreshore near the new island port. The reclamation of 48 acres in the area has been authorised and an area of up to 210 acres will be reclaimed by the Bluff Harbour Board as required. There is the probability that some of these sites will be adjacent to deep water berthage. All sections are fully serviced and water supplies are drawn from the Oreti River. Rating is about £11 per £100 of unimproved value.



The city of Invercargill, capital of Southland, looking from the Crescent past the War Memorial, along Tay Street.

—Hazeldine Photo

A Welcoming Hand

SOME roll their "Rs" and so proudly distinguish themselves as Southlanders. All hold out a welcoming hand and chances are it is calloused from making the place Southland — and making it distinguished.

It has been so since the first sails dropped between latitude 45 and 48 degrees south.

Bill Anderson's great grandfather sweated out the best years of his life here. Bill's grandfather carried on the clearing of bush and the stocking. Bill's father did more intensive draining.

From rich brown mud came rich pastures that are Bill's pride and the nation's.

From Southland into South Otago is the longest stretch of heavy pastoral land in New Zealand. But it is only part of the picture.

There are many Bills here. There

are yet more fellows equal in spirit with less of the heritage.

Theirs is a province with a job of work to do, a job being tackled with all the gusto of an All Black team. Evidence is everywhere.

Southland's standard of living is New Zealand's finest, and New Zealand's is held to be the world's best.

Southland sheepfarmers' average net incomes are far ahead of those elsewhere and the general taxable income equals the nation's highest.

So it is that Southland retail turnover per head of population is the highest in New Zealand. Yet the Scottish savings habit is still very much apparent and the Southland Savings Bank, for instance, has been built into an enviable situation.

The bank showed its mettle recently as New Zealand pioneer of a television system for some branches to facilitate handling of cheques.

It would surprise Southlanders if their City of Invercargill did not continue as one of the fastest growing in New Zealand. The Invercargill urban population now exceeds 46,000 while Southland as a whole has more than 100,000.

The People

Nearly half of the people are Presbyterians, which only reinforces observations of southern steadiness, for 95 years ago that picture was little different, a little more than half the Southland population being Presbyterian.

As well, it speaks highly of the church that has led the way in providing old people's homes. The Presbyterian Peacehaven settlement is known throughout the country.

There many people live out their twilight years in comfort and in the spaciousness for which the region is noted. About nine people to the square mile is Southland's population density, among the lowest in New Zealand.

It is a province of great power, great unity and great beauty.

Here are the nation's rosiest-cheeked children and the fewest shacks and mansions.

Here are the most independent individuals and united people.

Here is a place where a tape around the heart does equal a tape around the head.

It is a place that can produce two senior Cabinet Ministers and two High Commissioners as well as a Miss New Zealand (1964's) at the one time.

They are backed by the country's greatest farming potential, highest lambing percentages, world-record wheat and oat crops and all the rest.

Tourist Potential

At the backdoor lie the greatest combined tourist attractions: the most beautiful lakes, among them the deepest in New Zealand, the largest in the South Island, the longest in the southern series, and the only one with a "heart-beat"; the most awe-inspiring mountains and fiords, among them the tallest of sea cliffs; the finest glow-worm grotto; the nation's largest national park; plus one of the world's highest waterfalls.

In spite of there being a car to every three or so people, the place has the cleanest air — and the clearest ether too as evidenced by the international Awarua Radio.

Southland has the finest parks and playgrounds, finest trout and oysters,

finest paua shell, the only muttonbirds of significance and the only takahe and kakapo. Here also are the only wapiti.

And here are the keenest cyclists, some of the widest streets, an international motor-racing circuit, a good many of the best roads and certainly the best signposting and the world's finest walk.

Here are the richest rains and the lands carrying most sheep to the acre; here are the most fishing craft and the most and tastiest crayfish.

Here is a city that gives its name to a world-famous march, a city whose grins, give-and-take and occasional groans go to rhyme each day.

Here are the cheapest municipal bus transport fares, the most advanced liquor licensing system and some of the best sporting facilities — from horse-racing, golfing and skiing to Rugby, softball and athletics.

Great Wealth

In Southland are a people prudent, thrifty, yet the nation's most generous and tender-hearted. Here too are some of the richest counties and exciting engineering jobs.

Here is a harbour built on a sandbank and on it the world's first all-weather mechanical package loaders were put, all-Southland of course.

Here lie New Zealand's greatest coal and lignite deposits and the greatest

opencast coalfields, granite of acclaim, a greenstone Eldorado and other mineral occurrences from marble and mica to gold.

Scenic Wonderland

Here the Remarkable Mountains are remarkable and Paradise Valley is indeed a paradise.

Here are the most spectacular roads: the Devil's Staircase to Queenstown and the Wilmot road linking Lake Manapouri and Doubtful Sound.

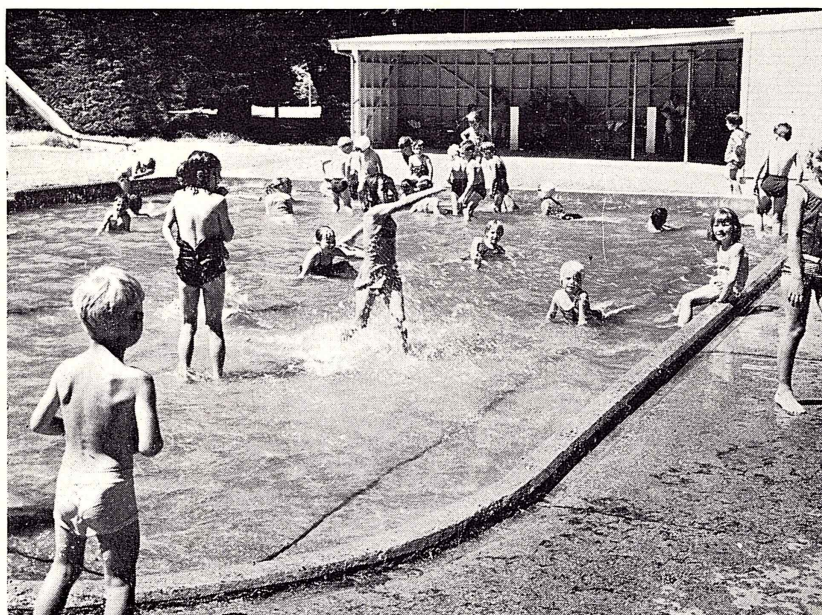
Here will be the largest subterranean power plant in the southern hemisphere and some of the cheapest power in the world.

Here are some of New Zealand's most modern and popular hotels, most go-ahead factories and best town plans.

Here is a place where ability is foremost. Southland years ago set an unbeaten record for the youngest city mayor in N.Z. and has put youth into top posts in all spheres — from Government to industry to national trade unions.

It all forms the Southland pattern, a harmonious and yet dynamic approach to the future.

And after wrapping up just a little of it, there is the restful shade of perhaps the world's most southerly pinus radiata, again a symbol of Southland natural wealth — and a job of work to do.



Paddling pool and shelter at Queen's Park, Invercargill, donated by the Rotary Club.

—Hazelndine Photo

Facilities for Recreation

THE Southland region provides facilities for almost every type of sporting and recreational activity. Most centres have playing fields or halls for sports such as football, hockey, indoor and outdoor basketball, bowling, cricket etc. Many centres also have their own golf courses. Invercargill has a fine tepid swimming pool plus a learners' pool which provide swimming in addition to the not-to-distant beaches.

Sporting activities are controlled by more than 40 provincial organisations, and provincial teams compete in the national championships in almost all sports.

For the racegoer, 13 clubs provide 20 days racing and 12 days trotting each season, with feature race meeting held on almost every public holiday.

Regular motor race meetings are held at the Sandy Point Domain near Invercargill, where there is a sealed motor track. An international meeting is also held once a year.

Water sports, mainly yachting, are

popular especially at Invercargill and Bluff and there is a rowing course on the lower Oreti River. This area is also used by power boat and water skiing enthusiasts.

The rivers and their tributaries provide excellent fishing as they are well stocked with brown trout, rainbow trout and salmon. Several types of duck and swan and other gaming birds are found in abundance throughout the province.

The Fiordland National Park, the finest hunting ground in the Southern Hemisphere, is within one days travelling distance of the area, and here the

hunter can choose from several types of deer, wild pig, moose and wapiti.

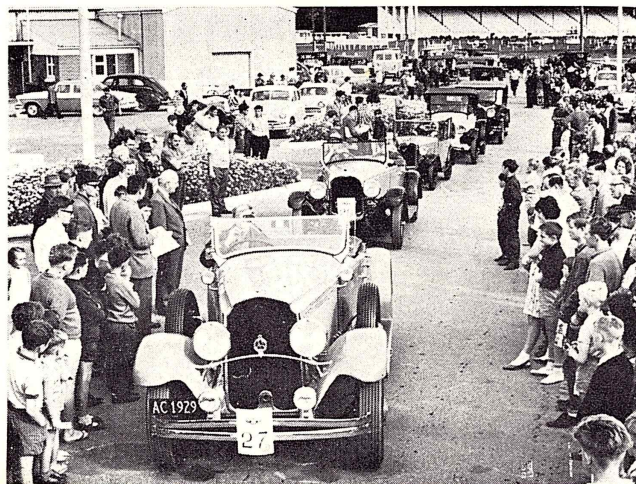
Southland is blessed with many fine holiday resorts and Riverton, Queenstown, Te Anau and Manapouri are scattered in these areas is world famous and includes such attractions at Mitre Peak at Milford Sound and many beautiful mountain walks.

Many Southlanders have holiday cottages at Stewart Island which is linked by air and steamer services to the mainland and is becoming increasingly popular.



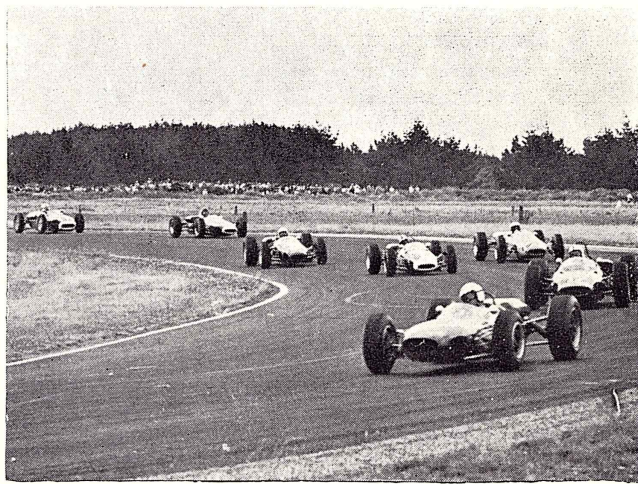
Whitebaiting is popular on many rivers within easy access of Invercargill. This shows trapping on the Mataura River.

—Hazeldine Photo



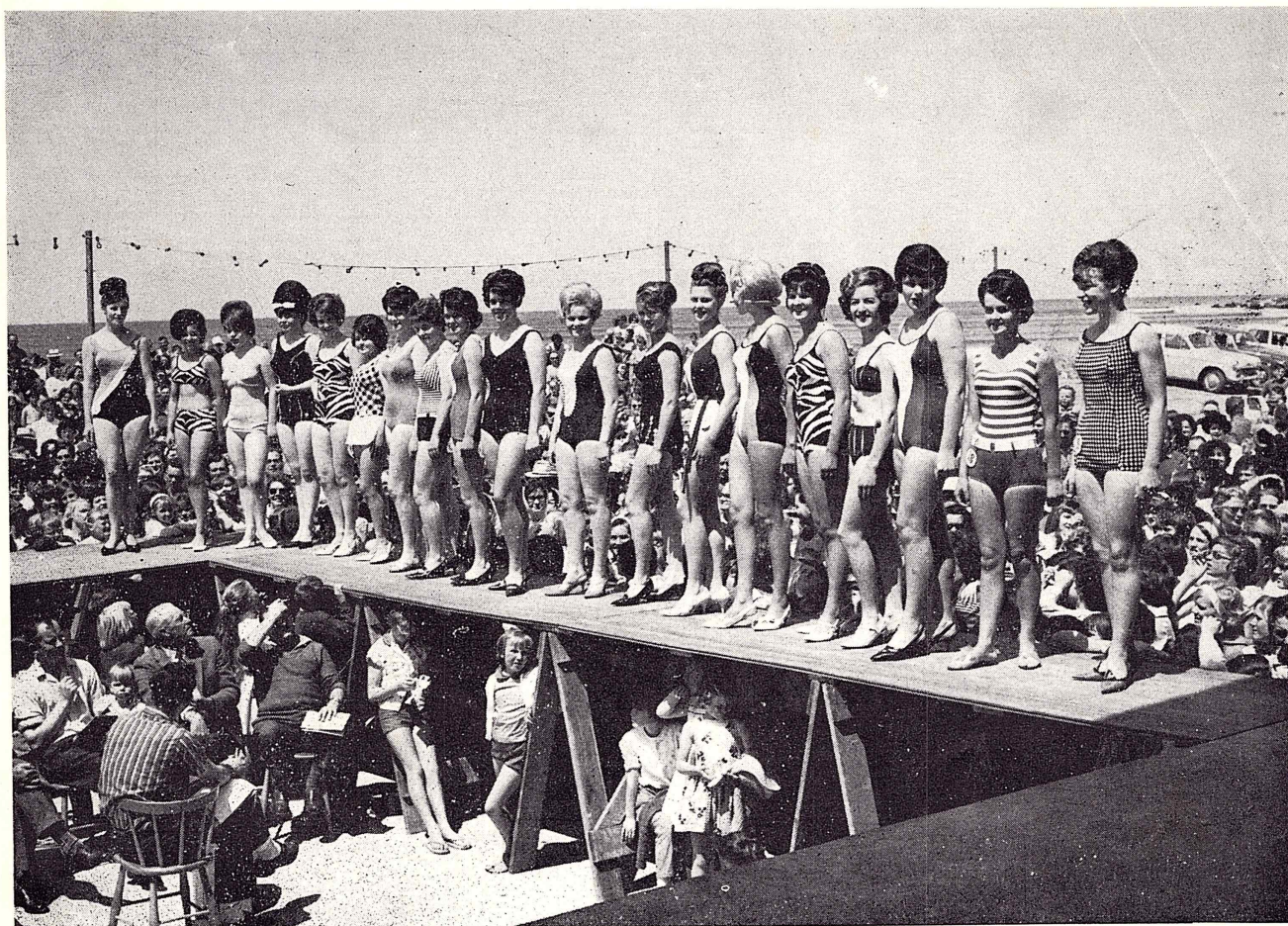
Start of the Invercargill Vintage Car Rally at the Showgrounds.

—Hazeldine Photo



An international motor racing track five miles from Invercargill at Teratonga.

—Hazeldine Photo



Bathing beauty contest at Riverton, Invercargill's playground, 24 miles from the city centre.

—Hazeldine Photo

PLAYGROUND OF THE SOUTH

THEY toil but they also play hard in the south, and where better? Name the sport or recreation . . . some big game fishing or skiing and skating or golf, and any of the other national pursuits or climbing or hiking or boating, motoring or flying — or just plain loafing. Southland facilities are five-star-plus.

Here it is that the natural welcoming spirit of the people is really paying off for the nation's burgeoning tourist industry.

Nowhere is it more apparent than at the two key resorts of Queenstown and Te Anau where skylines are changing with the seasons.

Preparations are going ahead for a 120-bed split-level further Tourist Hotel Corporation structure for Queenstown, while the Hotel Te Anau has been improved by the corporation to the extent of more than \$600,000.

At those and such other strategic centres as Invercargill and Gore, Southland is being geared — on a multi-million dollar budget — to continue its part in keeping tourism as the fastest-growing industry.

Te Anau is the outstanding current example, gateway to one of the most interesting regions in New Zealand, a scenic paradise hardly touched as yet.

Besides big private projects, the town that only a decade ago was a village is forging ahead with ambitious community efforts.

Te Anau plans include a big community centre on a 15-acre block in the town centre, a heated and enclosed 25-metre swimming pool, conversion of a nine-hole golf course into one of 18 holes, an outdoor roller skating rink, soundshell, putting green, barbecue and picnic facilities.

Lakeside Te Anau also plans for a swing footbridge over the nearby Upper Waiau River to give access for thousands of trippers to the great lake's southern shore, a project that will cost perhaps \$6000 but be among the greatest recreational contributions.

It shows how much of the region remains to be tapped. The footbridge will bring within a few minutes' walk of the town the best fishing spots, the only sandy beaches, the only shooting blocks, plus native bush picnic areas.

Demands are increasing. A 12-month



The beach at Riverton.

—Hazeldine Photo

survey completed this year revealed that 140,000 visitors had been in the Te Anau district. The camping ground alone had 3280 people each night for a three-week period and the average stay was three nights.

A night spin across the lake to the Te Anau glow-worm caves is an inter-

nationally-acclaimed thrill as are jet boat burls up and down the fearfully swift Waiau River. Trips to the caves and on the Waiau are provided by a company that operates two large boats, a fast launch and two big jet craft.

Only a few miles away is Manapouri, the lake described as New Zealand's loveliest, where still further craft ply, and work is advancing on a vast power project expected to yield electricity about as cheap as that anywhere in the world.

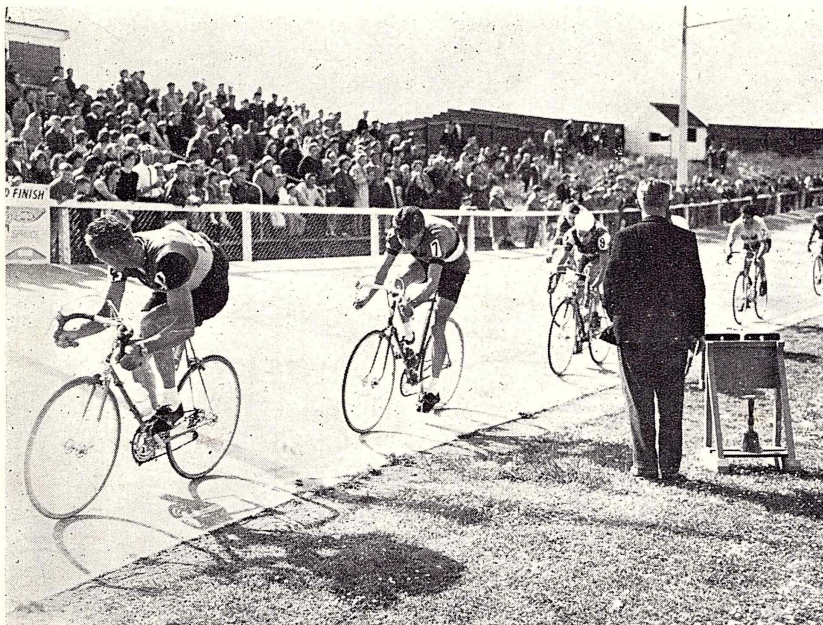
Then to Queenstown and a little Switzerland, where visitors can be ready for skiing only 24 hours after having left Sydney. The Coronet Peak skifield, to which \$200,000 worth of amenities have been added in the past three years, is the big winter attraction. Bob Nelson, professional skiing coach from Idaho's Sun Valley, says it will be only a matter of time before top American skiers migrate to New Zealand to spend winters in concentrated training at the peak, which has the reputation of having one of the world's finest skifields.

That is a measure of the place, crackling with ideas and the means to see them through. An artificial outdoor ice-skating rink in the Tourist Department Park at Queenstown is an instance. It won active and financial support throughout the southern half of the South Island — from Southland, Otago and Canterbury — and had also the backing of



The Waihopa Bowling Club, one of the many found in Invercargill.

—Hazeldine Photo



Cycling is a popular sport both on the roads and here at Kew Bowl.

—Hazeldine Photo

the Government. The result was the opening this year of a 160ft by 60ft rink with sheltered terrace to accommodate 1750 people.

But Queenstown and the spectacularly rugged Wakatipu district is not simply a winter playground. It is a year-round haven for the hedonist. Even Coronet Peak without the snow is a place from which to marvel after a glide to the top on a chairlift, and the hotel corporations' activities elsewhere are not without plenty of private competition. Among the most recent additions to facilities is a large, high-speed hydrofoil tourist craft, first hydrofoil on any New Zealand lake. Another new vessel for the lake is a kauri 50ft by 14ft twin-diesel launch able to seat 66 passengers.

The Wakatipu lures by its majesty and full spectrum of colours and not least by its romance from the time when gold was discovered in 1862. There is more than a touch of romance, too, in the Queen of the Lake, a 168ft steamer, Earnslaw, that for 54 years has been giving memorable service for up to 1035 trippers at a time.

By horseback around canyons, by jet boats along untamed torrents, by aircraft to famed Milford Sound and other fiords — opportunities are increasing for all who like to feel their adrenalin pumping anew through their systems.

Even walking comes into its own,

witness the track from Te Anau to Milford, setting fresh records yearly. Last season saw 2570 people make the trip, described abroad: "The world's finest."

The province's frontier country is crisscrossed by tracks. The 670 square-mile Stewart Island, aptly called by the Maori "The Land of the Glowing Skies," has its share with great potential. Last cen-

tury's Yankee sailors were aroused by such places as Big Glory and Port Adventure, and so are today's folk.

The multi-million-acre Fiordland National Park is on Southland's doorstep and everything is there for it to be nibbled, sampled or fairly thoroughly digested with all its fascinations in geology, vegetation and animal, insect and bird life. There is climbing, deer-stalking and wapiti trophy hunting to suit the most fastidious. The wapiti herd, unique in New Zealand, is the result of a 1904 gift of 10 animals from President Theodore Roosevelt.

Red deer weighing in dressed at more than 300 lbs. are not uncommon and there is equal joy in other shooting. The province's 4000 duck-shooters last season bagged about 40,000 birds. Then there is the angling that brings exponents 10,000 and more miles — sometimes just to catch big fish and let them go.

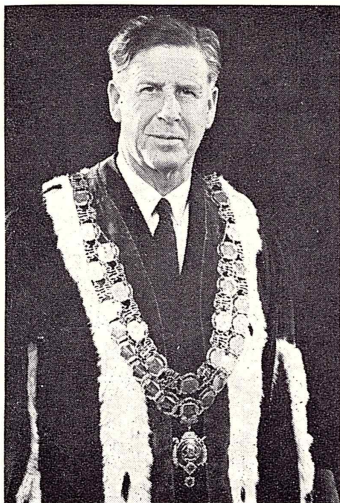
One guide knows about 70 streams for fly and spinner fishing within a radius of 70 miles of Invercargill City. In the area is enough diversity to ensure full fishing regardless of weather and the state of the water.

That angler not long ago took a 20 lb. brown with a threadline and silver wedge minnow in a tidal lake. And that was not the biggest taken in Southland. The heaviest reported officially was a rainbow that tipped scales at 29 lbs. There are unofficial reports of trout exceeding 30 lbs.



The start of a yacht race at Bluff.

—Hazeldine Photo



Mr N. L. Watson, Mayor of Invercargill.



INVERCARGILL CITY COUNCIL

P.O. Box 906, Invercargill.

Mayor: N. L. Watson.

Town Clerk: L. A. Best, F.R.A.N.Z., F.C.I.S., F.A.I.O.

City Engineer: K. A. Ballinger, A.M.I.C.E., M.N.Z.I.E., Regd. Engineer.

Area: 10,088 acres.

Population: 43,501 (1966 Census, provisional).

Rateable Values:

Capital £57,740,355; Unimproved £16,464,640.

System of Rating: Unimproved and annual.

General Rates: 4.053d in £ on unimproved value.

Special rates and levies: 1.315d in £ on unimproved value; 7.530d in £ on annual value.

Other Council Activities:

Electricity, abattoirs, baths, parks, reserves, airport authority, gas, traffic, transport, library, milk authority.

We Look Forward With Confidence

By N. L. Watson

Mayor of Invercargill

AS Mayor of Invercargill, the capital city of Southland, I am pleased to give some comments for inclusion in the Southland edition of the "Expands" series.

The people of Southland look forward with confidence to the future. A general feeling of optimism prevails in Invercargill and Southland, and this feeling is well based on production figures.

Over the past few years growth and development in Invercargill and Southland has accelerated to an amazing degree. A new harbour, with the most modern facilities, including five all-weather meat loaders of world-wide interest is typical of this development. Modern major superphosphate and freezing works have been constructed. Large numbers of industrial and commercial enterprises have also been completed or are at present being established. Major building programmes have been launched, probably the most "eye-catching" one being the seven-storey, 120-bed Invercargill Licensing Trust Hotel which now dominates the city skyline, and which is rapidly establishing a reputation as New Zealand's finest hotel. This

structure is being joined by a seven-storey Government administration block, nearing completion.

A city reclamation programme has been in progress for some years reclaiming from the estuary acres of ideally situated industrial land available adjacent to the city and the airport, where an airport terminal and control tower, fitting for the southern New Zealand terminus and for the city of Invercargill, have been completed. At the back of these progressive activities we have the statistical figures which show that the rate of growth of population in Invercargill over the last five years has been the highest in the South Island and the fourth highest in New Zealand.

I mention the above briefly as indicative of the current development of the city and throughout the province generally there has been a surge of expansion and progress.

It will be seen from a perusal of any agricultural map of New Zealand that Southland is one of the largest areas of flat and rolling fertile land in the country, and from it nearly all the production flows through Invercargill and

the port of Bluff. The further development of Southland and Invercargill is a logical result of the physical characteristics of the province from a primary producing and agricultural point of view.

After years of negotiation the Doubtful Sound-Manapouri power scheme is now under way and this multi-million project for the province will certainly accelerate the city's and the province's growth.

The establishment of an aluminium smelter here is still a very real possibility, although Southland people are not looking to this alone for prosperity.

The people of Southland and Invercargill are very proud of their Scottish heritage and investigation will show that nearly all the major developments which have taken place in recent years have been financed by the Southland people themselves, with little recourse to outside capital, and no doubt future development will follow the same trend.

With this increasing development in the south will come greater trade, prosperity and potential in Invercargill and Southland.



Corner of Spey and Dee Streets, Invercargill.

—Hazeldine Photo

INVERCARGILL CITY—Brief Facts

LAND FOR INDUSTRY

Heavy industrial sites are available on reclaimed land on the western side of the city at the rate of £7000 per acre or £2000 per $\frac{1}{4}$ -acre.

Light industrial land is available in the central-eastern and northern parts of the city on either a freehold or leasehold basis.

CLIMATE

Sunshine averages between 1600 and 1750 hours annually. Daily readings of over 14 hours have been recorded.

Frequent south and south-west winds.

Rainfall averages between 35 and 45 inches per year.

COMMERCE

Retail stores (1961) had the highest turnover per head of population in the country.

INCOME

Average taxable income (1961) equal highest in New Zealand.

AIR SERVICES

Three or four inward and outward NAC Friendship flights daily. Both approaches to runway are over flat terrain with no high ground or buildings to present hazards. Airport relatively fog free.

MOTOR VEHICLES

Motor vehicles one for every three people.

SPORT

Ample sporting facilities, including two golf courses, international motor racing track, rivers well stocked with brown trout, rainbow trout and Atlantic salmon in season. The city is within one day's travel of the finest hunting ground in the Southern Hemisphere — the Fiordland National Park.

ACCOMMODATION

Hotel accommodation recently increased by the completion of the Kelvin Hotel, seven storeys, recognised as one of the most impressive in the country.



Dee Street, Invercargill.

—National Publicity Studio

MONEY POWER OF SOUTHLAND

SOUTHLANDERS have never had it better and in large measure have themselves to thank. They are loyal and prudent with their highest average incomes in New Zealand.

At each end of the financial scale, retail and investment, there is the same dramatic quality in the pictures.

The money goes around in a big way. Nowhere else in New Zealand is the retail turnover per head of population anywhere near Southland's £358, based on an average of 90 people for each of 1087 or more stores. The South Island average is £309, while New Zealand's is £300.

The Invercargill urban figure is exceeded only by Hamilton's but

Southland takes first place nationally with the rural average of £133 and with the Gore borough's staggering £840.

Yet for all their good living, their washing machines (second-highest New Zealand density) and other aids, Southlanders know how to manage cash.

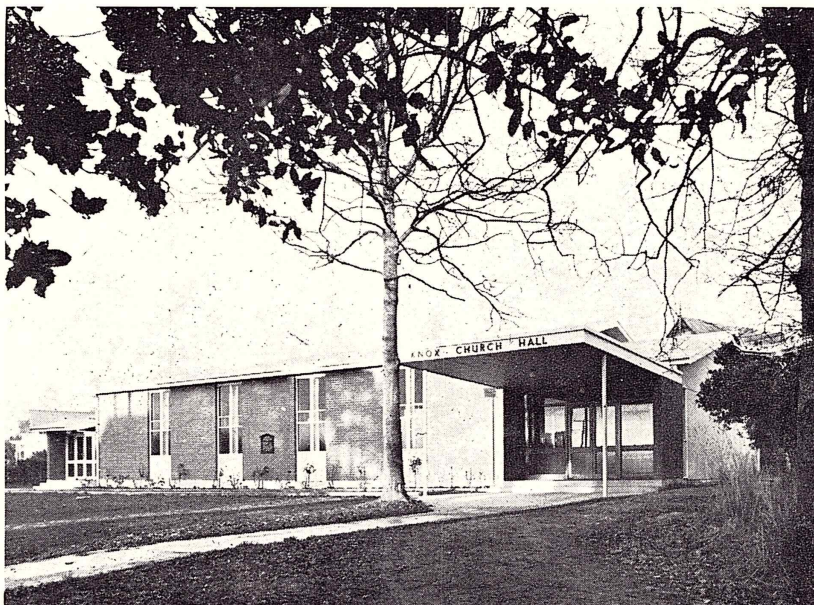
Financial Institutions

Bearing witness is the astounding growth of four Southland financial institutions: Southland Building and Investment Society; Permanent Building Society of Invercargill; Invercargill Co-operative Building Investment and Loan Society; and Southland Savings Bank.

There lies a basic reason for the ginger in the place, the ability to have the cake and eat it too. It has taken a long time to achieve, but the rewards are seen now on every street in every Southland centre and on nearly every rural property.

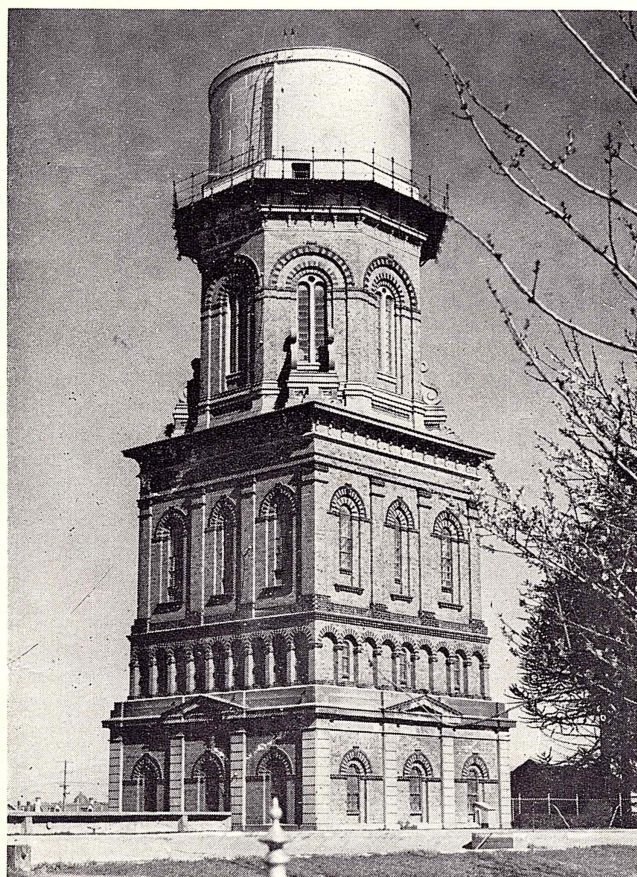
Southland Building Society

Great among the building societies is the Southland Building Society, whose total advances to mid-1965 exceeded £18 million. And the society was lending more than ever before in its now 97



Knox Church Hall, built by voluntary labour as a youth centre.

—Hazeldine Photo



CONTRASTS in ARCHITECTURE

THE OLD AND THE NEW

LEFT: Invercargill Water Tower.

BELOW: Menzies Building, newly opened to house Government Departments.

—Hazeldine Photos





New housing at Glengarry.

—Hazeldine Photo

years of operation. The fortnightly income from repayments and investing shares topped £85,000.

Record Advances

For instance, in the first two months of the last financial year, the Southland Building Society lent more than £1 million. In the previous year the society advanced a record £3,906,000.

In one fortnight alone, the total amount applied for was more than £421,000, with properties all over Southland to be valued.

In all, applications for loans valued and considered by the society's board of directors amounted to more than £8 million.

A large increase in deposits, up more than £1,570,000 for that year, enabled the society to finance a very large proportion of the many house sales and new homes in Southland and, although the New Zealand mortgage rate on

loans had increased the society kept its rate unchanged, the lowest in New Zealand apart from Government loans.

Naturally, most of the loans are made in Southland — 91 per cent of the £18 million-plus. Nevertheless, the reputation of the society has gone afar and former clients now in other centres still prefer to deal with the Southland society. Indeed, most of the loans outside Southland are held by former Southlanders, some of whom have transferred mortgages to properties bought in other centres.

Sphere of Operations

Dunedin is the society's second-biggest loan area — nearly 5 per cent of the loans going there last year, followed by Christchurch, Timaru, Wellington, Balclutha and Oamaru.

And through it all, the society has been let down only rarely. In 1965 it recorded its first loss for many years

when it had to write-off £600 on a security sold. The circumstances were exceptional.

Permanent Building Society

Also a barometer on the prosperity of the region is the Permanent Building Society of Invercargill, which has been serving the community for more than half a century. Last year its assets soared to more than £1 million and in that, too, was evidence of the uncoiling spring that is Southland. While it took 36 years for the permanent society's assets to reach £500,000, it took only a further 15 years to double to £1 million.

The years ahead, given relatively stable economic conditions, are expected to see a marked acceleration in growth. A record £244,000 was advanced by the society last year, making total net current advances higher by £99,271, all secured in Southland and the lakes district.

Invercargill Building Society

Astounding growth has also been the lot of the Invercargill Building Society, whose shareholders' funds rose last year to £302,000. Total funds then employed by that society were £425,000, compared with £241,000 five years before — an increase of something like 75 per cent.

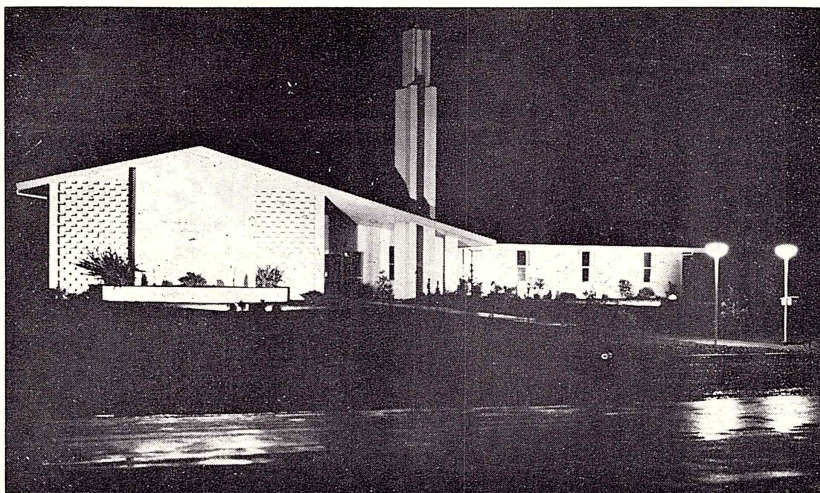
In the five years, the society's mortgages went up more than 70 per cent — from £227,000 to £386,000.

The Sky The Limit

But that is Southland all over: Big growth rates in all sectors; not yet in the space race and with just the sky as the limit.

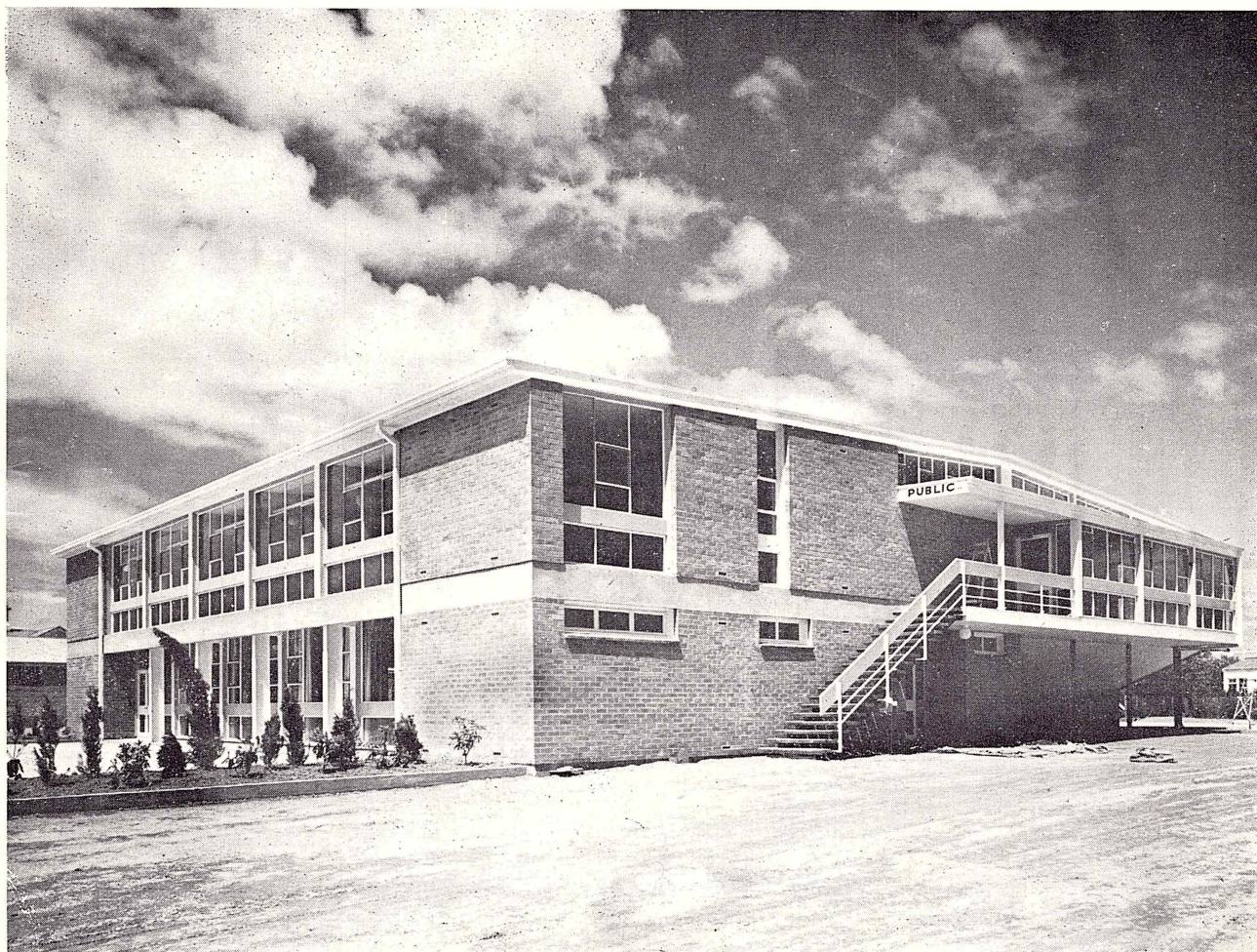
An early and celebrated parliamentarian's prediction was that there would be two great cities in New Zealand — Auckland and Invercargill.

Today Invercargill is a model in many spheres and certainly in its money power and money care is great.



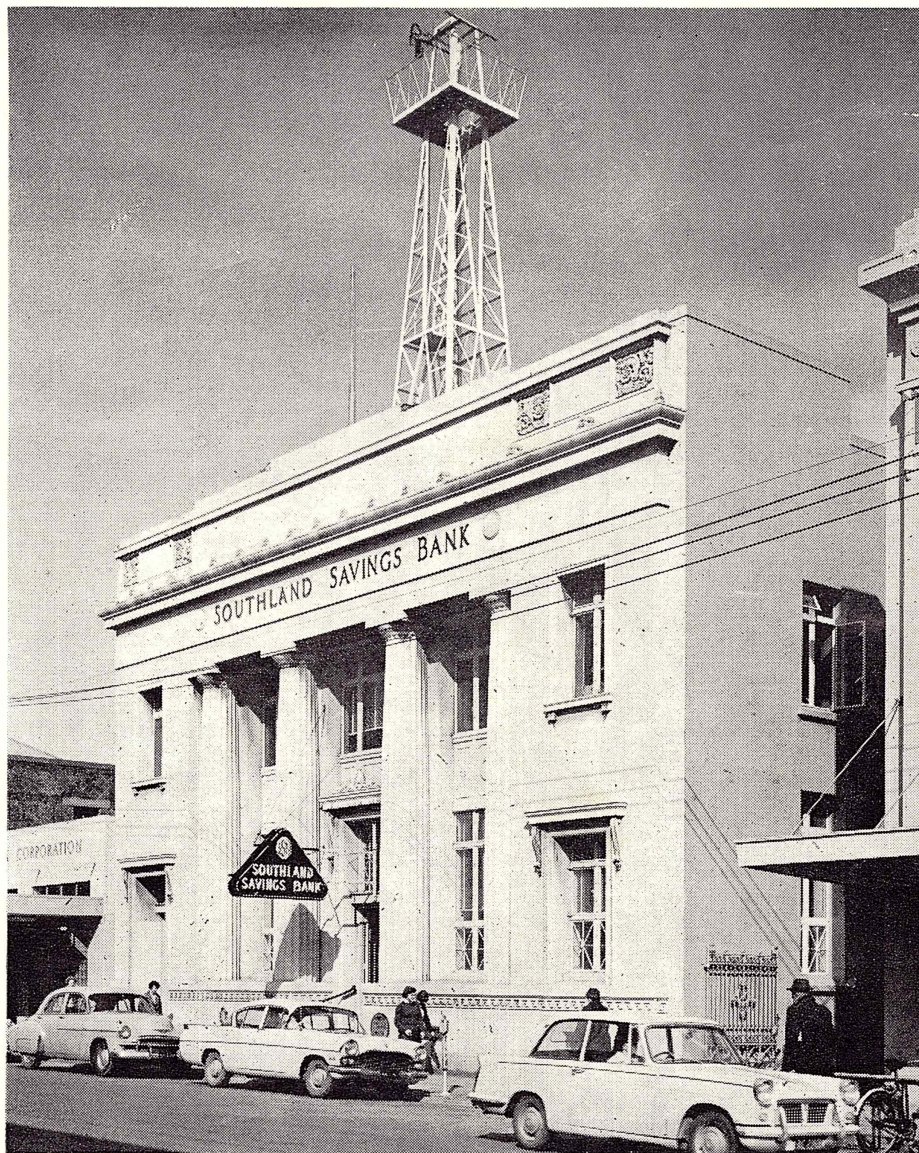
The Mormon Temple by night.

—Hazeldine Photo



The Wool Exchange Building.

—Hazeldine Photo



THE SOUTHLAND SAVINGS BANK

FOR FULL BANKING FACILITIES

For over a century the Southland Savings Bank has progressed with Southland and now has eleven branches. The Southland Savings Bank offers you all modern Savings Bank facilities, including interest bearing Investment Accounts and Cheque Accounts. Open a Savings Account now and grow with Southland.

THE SOUTHLAND SAVINGS BANK FOR FRIENDLY SERVICE . . .



Head Office: Don Street, INVERCARGILL. Phone 87-029.

Branches at: INVERCARGILL — Don Street, Windsor Street, Strathearn (Elles Road South). GORE; RIVERTON; WYNDHAM; MATAURA; TAPANUI; WINTON; OTAUTAU; BLUFF; QUEENSTOWN; LUMSDEN.

The Southland Savings Bank has made an important contribution to the districts development in that it has been remarkably successful in the collection of savings. This has resulted from the special facilities including a cheque system that the bank has provided which has materially assisted many people in accumulating sufficient capital to start in farming and business. Secondly, it has always been the policy of the Board to channel as much as possible of the collective savings back in farming, manufacturing etc., by way of mortgage loans at a reasonable rate of interest, and this has greatly stimulated the productive capacity of the province.



WINTON BRANCH

THE Southland Savings Bank which recently celebrated its centenary is an institution which holds a very special place in the community.

Commencing in a very humble circumstance, in very hard times, it was operated part-time by a public secretary in a small office for a few hours each week.

The bank had to struggle for existence in those early days, in fact, surprising now, it almost failed to survive. Then came the realisation that the success of the young bank depended on a continuing policy of service to the community and this really falls into two categories — service to the community and service to the individual.

Quite fittingly it was this unceasing quest to provide the fullest and best possible service to the individual that

led the bank to provide the facility that has made it unique among trustee banks anywhere in the world, and has resulted in the highest level of residual savings — the provision of full cheque facilities with interest on the balance of the account.

Operating in a district with a total population of some 100,000 persons the bank has in excess of 54,000 accounts with credit to depositors of over £14,000,000.

Earlier there were some who thought that cheque facilities might militate against total savings but the outstanding success of the Southland bank has made most of those people now staunch advocates of the system. Hence we have today's nation-wide desire and demand from savings banks and from their depositors to have like facilities.

The success of the policy of maximum

possible service to the individual has, of course, greatly aided the other prong of the policy; service to the community, and has enabled the trustees to channel the collective savings of the people to the best effect, thus boosting the productive and manufacturing capacity and resources of the province and also helping to provide the municipal and community services needed for the growing and prosperous community.

The bank, of course, has no shareholders. Its affairs are administered by a board of trustees, all of whom are prominent and successful Southlanders, whose concern is the welfare of the institution and all the people it serves. All profits remaining after making annual donations are retained in the organisation to provide for the expansion of its facilities and to provide stabilising reserves.

Donations from the bank have continued to grow in magnitude and in last year alone the bank distributed no less than £25,000 to assist worthy community and charitable causes and projects.

And so the twin policy of "service to the individual; service to the community" goes on. This last year the bank opened the second of a chain of suburban branches to be linked to the head office by closed circuit television — another first in the world. Invercargill depositors may now receive full banking facilities at any suburban office.

In addition the bank has opened four new branches and Southlanders are now serviced by branches at Bluff, Gore, Invercargill, Lumsden, Maitauro, Otaitau, Queenstown, Riverton, Tapuni, Winton and Wyndham.



THE MAITAURO BRANCH



Rolling Southland countryside.

—Hazeldine Photo

SOUTHLAND — Primary Production

Farms in the province are generally regarded as among the most productive in the country. The use of fertilisers has resulted in the land having the highest carrying capacity in New Zealand.

The total provincial area is more than 7 million acres of which occupied holdings amount to about half, with the majority of this cultivated and the remainder unimproved.

Sheep population approximately 6 million and about 150,000 cattle.

SOUTHLANDERS are in their element developing, and if what they have developed from the land is remarkable, then what is being developed is tremendous by New Zealand standards. And it is just a start. Experts calculate that Southland farmlands, in spite of their world record wheat and oat crops and world renowned meat and wool, are only half-developed as yet. New land being put under the plough keeps the region all the more in a healthy state of flux.

Exciting development is being done on

the 3,700,000 occupied acres, 2,225,000 acres of which are developed or partly developed.

Still more exciting development is being done on the outskirts.

Right now Southland has about 6900 acres in flax (most in the South Island and second only in New Zealand to Wellington's 7900 acres); 1,191,000 acres in tussock (New Zealand's third largest such area); 40,500 acres in native grass; 303,000 acres in fern, scrub and second-growth; 147,000 acres in native bush; 67,000 acres barren and unproductive

(second smallest in the South Island); and 1,757,000 acres of unimproved occupied land. That will not be quite the picture next year. It will be far from the case in a decade.

Thus Southland is a cynosure. Further evidence of keen Government interest was given in a recent deal worth about £500,000 in which more than 135,000 acres in Northern Southland were taken over by the Crown from May of this year for development into an estimated 75 farm units, including two runs. The land, formerly in three stations, currently has 4000 acres in grass and carries 2000 run cattle and more than 27,000 sheep. This year the Department of Lands and Survey proposes to grass a further 240 acres of the property, a prompt start and indicative of the whole energetic pushing back of the "great frontier."

Yet it was only in 1953 that such development on a truly large scale began in Southland. In that year the Lands Department acquired a 63,000-acre station. Now the department has more than 387,000 acres under development and expects to produce at least 300 farms for settlement over the next 20 years. So far 28 sheep farms and a dairy unit have been settled, totalling 16,000 acres.

The department is by far Southland's biggest farmer, a highly successful one. It has confounded the sceptics more than once. Here is its 1964-65 programme:

Grassing and cultivation: 193,734 lbs.



Government scheme bringing in land near Te Anau.

—Hazeldine Photo

of grass and crop seed sown; about 270,000 bales of lucerne and meadow hay cut; an estimated 15,789 tons of lime sown and 8823 tons of superphosphate.

Production: 18,784 breeding ewes sold; 42,950 lambs and hoggets sold; 2863 run cattle sold; 1,472,895 lbs. of wool shorn.

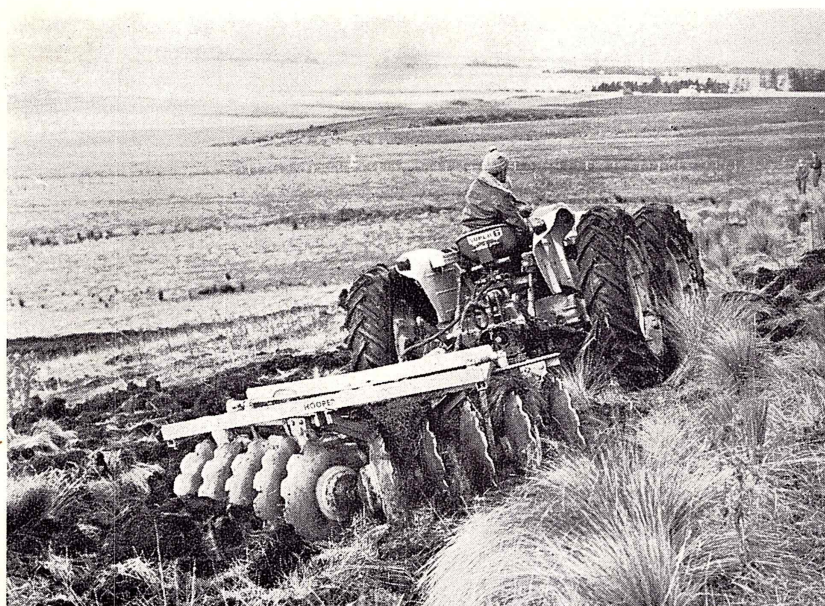
Buildings erected: 91 houses, 48 garages, 26 woolsheds, three wool-implementation sheds, 20 shearers' quarters, 57

implement sheds and 143 haybarns.

The bulk of that land would be far too costly for private development on the scale undertaken by the department, which has been spending about £1,000,000 yearly on its Southland jobs and now will invest even more, a tremendous development in itself from the days in 1941 when a start was made on development for settlement by returned soldiers. Today the department's Southland properties form the largest land development undertaking in New Zealand.

It has grassed more than 72,000 acres, built more than 650 miles of fences and laid more than 17,000 chains of drains, and results have been spectacular. To the north, at Te Anau, for instance, land when taken over carried about 9500 ewes, 3500 dry sheep and 1500 cattle. Now the stock figures for the same land are about 100,000 ewes, 34,000 dry sheep and 8000 cattle.

It is far from being a one-sided business, however. A respectable area, about 246,000 acres, is being developed privately. For example, Mr W. E. Hazlett, who sold the most recent 135,000 acres to the Crown, spent well over £400,000 in land development on the properties. He spent up to £90,000 in one financial year. In all, Southland is laying about 20 miles of field tiles weekly. Nearly 30 excavators are hard at it and so is everyone, from man and dog to topdressing pilot.



Using discs on rolling hill country near Balfour.

—Hazeldine Photo

Today the topdressing pilot is no less important than the dog and is taking care of an increasing area to the benefit of the nation. Southland is second only to Canterbury in the South Island in the area topdressed yearly and is fifth in New Zealand statistics. In the year to January 31, 1964, 703,000 acres were spread with artificial fertiliser in Southland, 73,000 acres with lime and 160,000 acres with both artificial fertiliser and lime. That gave a total area of more than 936,000 acres topdressed and 221,000 of the acres were topdressed by aircraft, which spread 24,131 tons of fertiliser. That again is a measure of the place.

Southland's Nokomai Station gives a good indication of what a big topdressing and oversowing programme achieves. Since a big programme was begun there in 1960, more than 7000 acres have been covered and the results are an increase in wool weights from 6.4 lbs. to 8 lbs. a head and a lambing percentage increase from 63 per cent to 73 per cent. Sulphurised, molybdc superphosphate has been applied to the hill country at 1 cwt to the acre, which cost (including aerial application) £1 an acre. The basic ingredients of the oversowing mixture have been cocksfoot and clover.

So it is that much attention is being paid to expert assessments of Southland potential. Among the best assessments are those of Mr M. V. Hadfield,



Wool brings in much of the province's wealth. Dalgety & N.Z. Loan store covers 5 acres.
—Hazeldine Photo

assistant director in the farm advisory division of the Department of Agriculture. He says the high fertility Southland farms, though very efficiently farmed, are considerably short of their farming potential and an increase from 2.8 million ewe equivalents to 4.4 million ewe equivalents is considered quite possible. In addition, 30,000 head of fattening cattle and 40,000 acres of cereal

and other "cash" crops could be included. Then the carrying capacity of the high fertility soils would correspond to six ewe equivalents an acre.

On Southland's medium fertility downs and plains, for potential to be truly tapped, sheep numbers must rise 80 per cent in contrast to the estimated 60 per cent on the high fertility soils, and it is assumed that increases in cattle should parallel those of sheep. Mr Hadfield says cash cropping on these soils is at a relatively low level considering the general suitability for wheat and more than 10 per cent of the area could be in cash crops. It is estimated that the present area, increased threefold, would represent a satisfactory balance of crops to pasture.

Southland pastoral lands currently carry about one ewe equivalent to 4½ acres and average about one breeding cow equivalent to every 30 sheep, says Mr Hadfield. Under full development, sheep numbers there can at least be doubled and the cattle increased fivefold, he says. That would give a general carrying capacity of one ewe equivalent to about 1½ acres.

In brief, it is thought the number of Southland sheep can be doubled, the number of cattle tripled, the wheat area pushed to 120,000 acres, the area of winter and lamb fattening feed doubled and the lucerne acreage nearly tripled. Not to be forgotten is the fact that most often in Southland the actual exceeds the expected.



Stock sale at Lorneville, 5 miles from Invercargill.

—Hazeldine Photo



The pick of the province's stock parade at Invercargill A. & P. Showgrounds.

—Hazeldine Photo

SOUTHLAND — In Clover

EYE-OPENING success goes hand-in-rough-and-friendly hand with Southland farming. Nothing is in half measures. This boot of New Zealand has marched far in the century since red tussock or scrub and broadleaf-podocarp forests covered the land. Yet the potential remaining is staggering and even to the most optimistic of economic researchers.

Here are more than seven million acres at the top of New Zealand and appropriately in the very form of a solid boot. In several important sectors of the nation's farm economy, "the boot" has become a top scorer.

Of the 3.7 million occupied acres, 49 per cent are used for mixed farming, 38 per cent pastoral, 17 per cent partly developed and 5 per cent still to be developed; and in each of these cate-

gories Southland has made its mark — from broad plains, from the low rolling land to the east, from the ruggedness of the west and from the high tussocks of the north.

On the high-fertility alluvial plains and terraces is the meat and wool wealth for which the province is best known. These 800,000-odd acres support more than half Southland's sheep population — many properties carrying five ewe equivalents an acre, some carrying six and a few carrying as many as seven, the first and most splendid eye-opener for the visitor. Dairying is also important, though, and part of the area along the coast, while too wet for cereals, is extremely good for root crops.

On rolling downs and northern Southland plains are further stock concentra-

tions, from two and a half to four ewe equivalents an acre, but also high-yield cropping, about two-thirds of the province's wheat. Great tracts are being developed or await development, ranging from fairly cheap and simple cultivating and sowing on comparatively low and easy country to aerial oversowing and expert stock management on steeper land.

The average wheat yield is the highest in New Zealand, the 30,000 acres yielding around 65 bushels an acre when the national average is 53.03 and the South Island average 49.15. The Aotea variety yields 65.89 bushels an acre, Arawa 61.47, Hilgendorf 1961 60.77 (highest in N.Z.), and Cross Seven 64.64 (highest in N.Z.). Cross Seven accounts for the lion's share of the acreage — 10,583 acres, with Aotea over 9897 acres.

Southland's wheat production is 13.2 per cent of the national total and is fast increasing.

Highest national yield also goes to Southland oats — 8000 acres yielding about 600,000 bushels at nearly 75 bushels an acre, far above the New Zealand average of 58.24 bushels. Here Southland earmarks more than 30 per cent of the New Zealand production, mainly with the Onward type (over 5400 acres) at 76.40 bushels an acre, followed by Grey Winter 54.39 bushels, Algerian 100.0, Black 58.28, Dunn 78.87 and Other White 61.92.

Barley and peas from Southland do not contribute significantly to national production tallies, but again the yields are significant. The barley yield is just on 61 bushels an acre, highest in the South Island, and peas run at more than 33 bushels an acre, also highest South Island yield and above the New Zealand average.

It is a massive yearly harvest from Southland fields: Around 2 million bushels of wheat, 600,000 bushels of oats and 43,000 bushels of barley, plus the 6000 tons of potatoes, 11,000 bushels of peas and tons of swedes (34.7 per cent of the New Zealand total), turnips and rape (37.9 per cent) and chou moellier, kale (17.1 per cent).

There would be none of it though with out the grasses, clover and lucerne capabilities and which in turn make up nearly a tenth of what is sown in New Zealand for seed or 13 per cent for what is used for hay and silage. Southland had to drag itself up from mud, but certainly it is now in clover.

Among the proudest of Southland accomplishments is the lambing percentage, put fully 16 per cent higher than the national average by the Department of Agriculture. Latest Southland lambing percentage average is 117.4 per cent compared with a national average of 101.1 per cent. Southland's two big counties are also top of the lists, Southland County with more breeding ewes than any other county in the country (3,657,000) and the highest lambing percentage (119 per cent), Wallace County running a close second with 113.6 per cent.

In all, Southland has about 7 million sheep, distributed among about 4700 owners. The provincial total for breeding ewes is headed only by Canterbury and Wellington, but the peak lambing percentage gives Southland second place with its number of lambs — 14.3 per cent of the national tally.

Lambing success was highlighted this year by the Challenge Cup for the best shipment of lambs through the British New Zealand Meat Company being awarded to a Southland farming partnership. It was the first time the trophy had been awarded outside Canterbury and it went to Messrs Arthur and Lex Moynihan, who have a 354-acre property.

Their lambs were all by Southdown rams out of Romney ewes, as is the case with millions of other New Zealand lambs for export. The Moynihan brothers shipped 2021 lambs weighing 31.2 to 33.5 lb and in its notice of award, the British New Zealand Meat Company's London office said: "Your lambs have been as near perfect as one could ever expect, the conformation has been splendid, and so has the meat content, with just enough fat on the loin to make the joints most attractive."

The Moynihan's award-winners were among nearly 4,500,000 lambs killed for export that season when three-quarters of a million sheep and more than 40,000 cattle were also put through the province's four large freezing works. The lamb, sheep and cattle kills are far ahead of those even eight years ago. The lamb kill is up 43 per cent on the 1958 figure, the sheep kill is up 65 per cent and the cattle kill has risen 53 per cent. Between 1958 and 1959, the cattle kill fell by no less than 42 per cent and the increase since lends emphasis to the success of a switch from dairying to beef production.

There are about 140,000 beef cattle now, of which a little less than a third are breeding cows. Beef is expected to play an increasing role in Southland, but observers hope it will not be much more

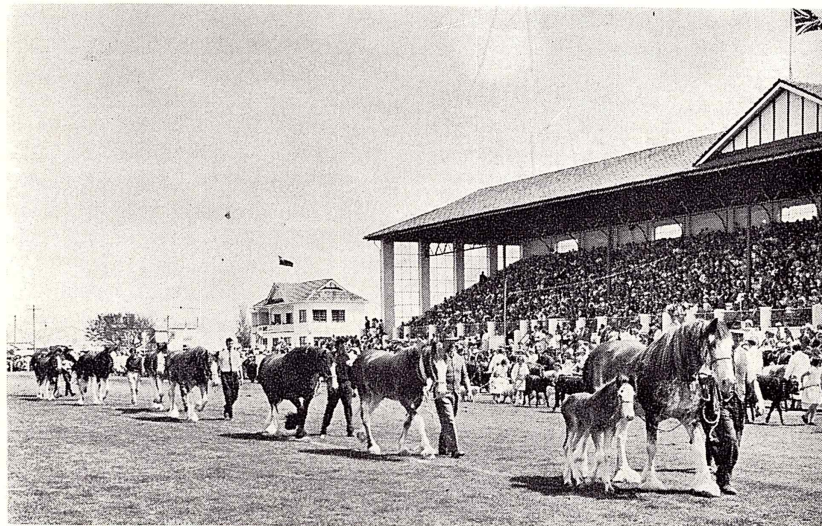
at the expense of dairying. There are around 45,000 dairy cattle of which 28,000 are breeding cows and the dairy farmers support 17 dairy factories, to which high cheese honours have gone. Dairy cows milked tally about 27,000, compared with nearly 38,000 in 1957, a decline common to all South Island provinces among which Southland stands third.

This then is the southern stock pattern, the statistics all subject to big movements upward: Sheep 12.5 per cent of the New Zealand total; beef stock 3.9 per cent; dairy cattle 1.5 per cent; pigs 1.1 per cent.

Perhaps the steadiest growth rate has been that of the wool clip, which in the 1965 season brought a cheque of nearly £11 million. The wool clip, indeed, is a Southland barometer, depicting the southern and national economy. In 1926, for instance, 23,867 Southland bales of wool grossed £342,521, an average of 11d a lb. In 1936 there were 50,599 bales at 8.82d a lb, 1946 79,283 bales at 13.55d a lb, 1956 120,586 at 47.42d a lb, and this year the offering should exceed 183,000 bales.

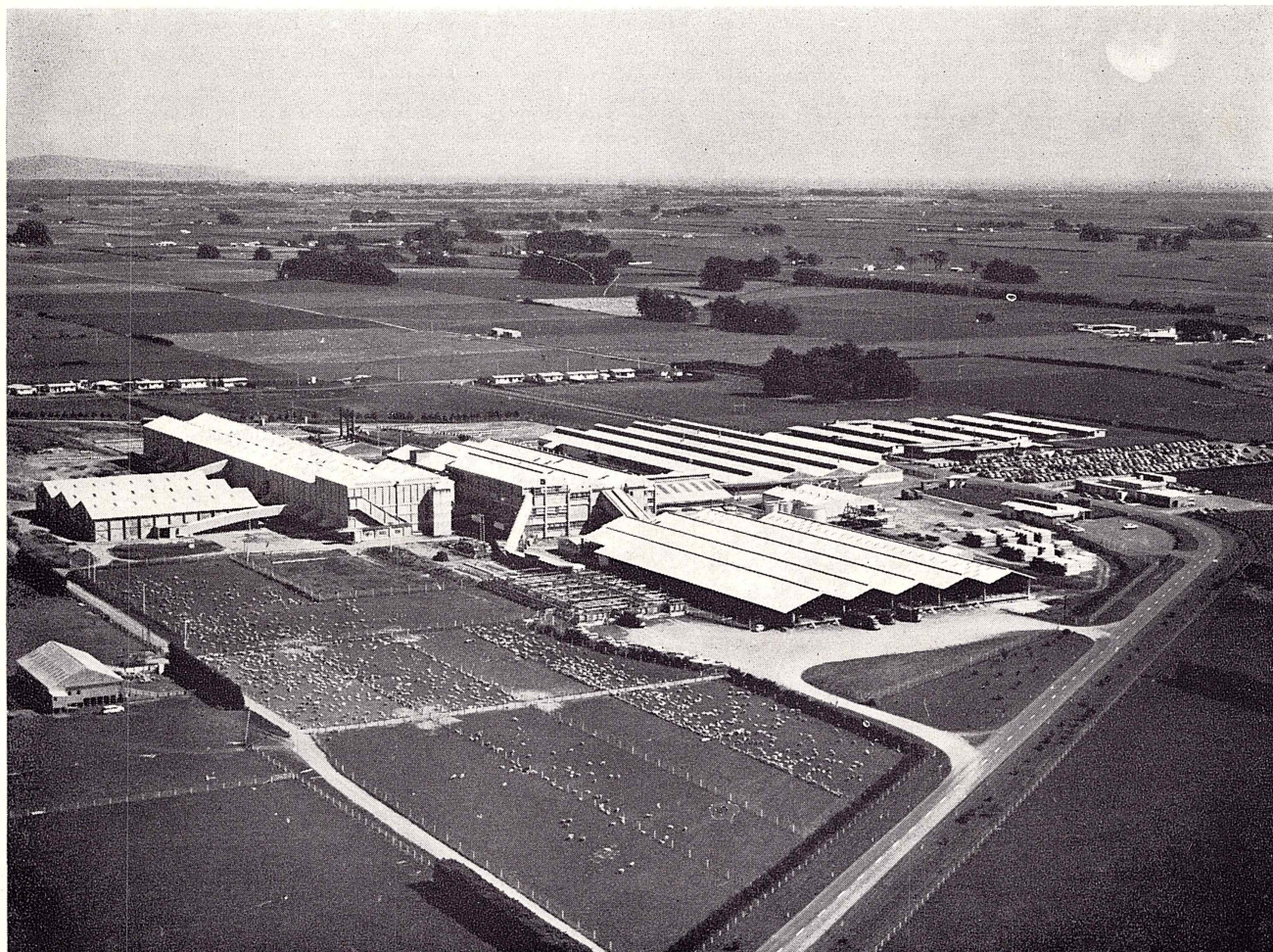
There are some places in clover awaiting the eager eye and hand, there are more being readied and there are many more awaiting the 8400th tractor. At present there are around 5220 "places" under this sun. Southland County has the bulk, about 3930 properties covering about 2,100,000 acres; Wallace County, 1272 covering 1,216,000 acres; and Stewart Island, 18 covering 16,934 acres.

The Southland properties average 637 acres each, compared with the South Island average of 988 acres.



Horses parading at the Invercargill show.

—Hazelidine Photo



The Alliance Freezing Works, the newest in New Zealand, built by the Farmers' Co-operative Company six miles from Invercargill.

ALLIANCE FREEZING WORKS

New Zealand's newest and most modern
meat processing factory

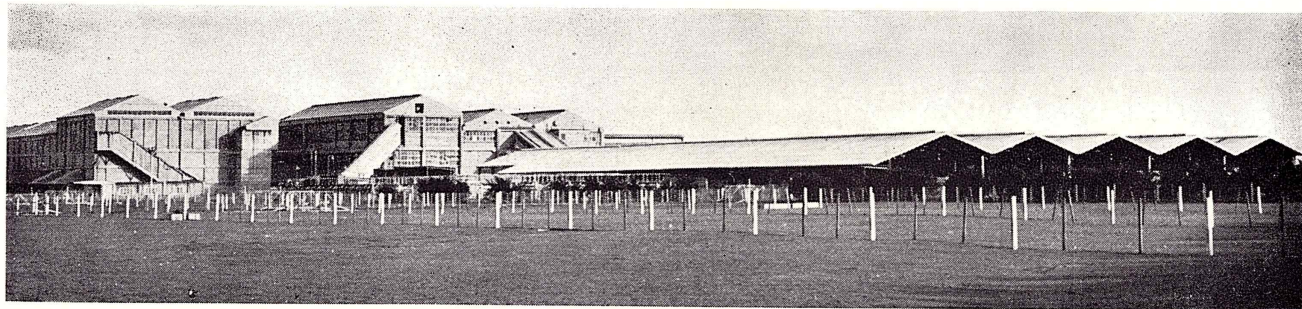
THE first freezing works were constructed at the Bluff in 1885, and were operated by the Southland Frozen Meat & Produce Export Company, which was formed in 1882. Meat frozen for export from the Bluff plant was then killed at Makarewa and Wallacetown. The next works were built at Ocean Beach in 1890 as a result of

the enterprise of the late Sir Joseph Ward.

These were followed by the Mataura works in 1893, and the Makarewa works in 1912. By 1916 the annual kill in Southland had reached nearly half a million. From then on steady progress continued and in 1943 the annual kill topped two million. The years follow-

which helped justify the building of the Alliance works later on. This development was due largely to the use of modern farming techniques and fertilisation.

The Alliance Freezing Co. (Southland) Ltd was formed in 1949, and became the first new freezing works to be opened in the Southern Hemisphere for



General view of the works from ground level, with loading chambers to the right and the main chambers and killing sections to the left.

ing 1929 produced phenomenal increases 40 years. These works were opened in March 1960 on a 600-acre site at Lorneville, six miles from Invercargill.

The erection of the Alliance Freezing Works was an important milestone in the history of New Zealand's freezing industry. Planned as the latest design for integrated production, the works encouraged and provided for increased beef cattle production in the province.

Cost £4½ Million

The total cost of the works was over £5,000,000, of which £4,250,000 was provided by the N.Z. Meat Board. The balance of the cost was contributed by the farmers of the Southland district.

Cattle raisers were now able to quit their stock at the time most suitable, and could thus devote more land to the grazing of store cattle. This meant better control of pastures by the avoidance of damage caused by cattle to sheep pastures during unsuitable seasons.

Industry Under Pressure

Prior to the establishment of the Alliance Works the industry was under constant pressure, as stock had to be sent out of the province to be killed. This meant a loss of time and money through transportation. At times the flooding of the Canterbury market with surplus stock from Southland adversely affected stock market prices.

The completion of the Alliance Company was well-timed not only with relation to the new Island Harbour guard to the rise in production, but also port at Bluff. The general expansion of the port attracted a bigger volume of shipping, the lack of which had, on occasions, prevented the adequate clearing of stores during busy periods in the past.

Works Throughput

The opening of the works saw a substantial rise in the total killings. The

actual sheep and lamb kill for the 1960-61 season (the first season of full operation) was 1,201,548. This rose to 1,333,711 for 1961-62, and so to 1,573,026 for the season ending September 1965.

Even more spectacular has been the increase in cattle killing. From a mere 7657 head in 1961, the total rose to 10,635 in 1962. The total for the season ending September 1965 was 20,073. The Alliance works is the only one of the four in Southland that remains open for killing as required during the off-season.

In 1965 the works handled 12,873 bales of wool as compared to 11,935 in 1964, and 4725 casks of pelts as compared to 4443 in 1964. The Alliance Company was also first in the bulk tallow field, with large road tankers transporting the tallow from the works to the port of Bluff.

Increase in Staff

With the great increase in killings the staff has also grown. At the opening of the Alliance Company the staff numbered 700 seasonal workers and 100 permanent workers. It has now increased to 900 seasonal and 200 permanent.

Accommodation is provided at the works for almost 300 employees. It comprises well designed blocks of living quarters and each man has a single room with good heating and ventilation systems.

Modern Premises

The Alliance works comprise over seven acres of roofed-in area. The wide, four-gabled entrance to the stockyards is the dominant architectural characteristic of the works. This area, which can take a full day's kill, has thousands of feet of modern galvanised tubular framed partition panels. An 80ft concrete ramp stretches across the entire width of the chains, which extend from the slaughter pens upwards to the mutton floor.

The carcasses are moved by means of conveyors to the cooling room and then

on to the blast freezing rooms. From here they are taken to the cold stores, which have the capacity to handle about two-thirds of the season's kill.

New Cold Store

A new cold store has been completed and is now in operation to meet the requirements of the expanding output. This is the second store to be built during the past two seasons. These stores represent a capital investment of approximately £450,000. The immense capacity of these cold stores helps to relieve the pressure on port storage facilities following periods of peak production.

Effluent Treatment Plant

Perhaps the most impressive and least evident of ancillary equipment is that at the effluent treatment plant built about a mile away from the main body of the works. It has four huge circular bacteria tanks each approximately 80ft wide and 35ft high. Each tank holds about 850,000 gallons. The overall capacity of the system is equal to that required for sewage services in a city of 100,000 head of population.

First Computer

Another important development was the installation of the first computer to be introduced into the freezing industry. The installation of the computer was a continuation of the company's policy to keep the facilities up-to-date in all spheres of operation. This equipment effectively caters for any increasing activities as well as being able to handle all routine accounting and statistical functions more efficiently and accurately than previously.

Expenditure has been continued on new equipment and facilities to meet the requirements laid down by the new hygiene regulations. Included in these new facilities are extensions to the sheep yards, modification to sheep killing chains, and the installation of "on the

rail" beef dressing. Expenditure under the new Meat Act has so far amounted to £150,000 and it is estimated that the completion of these facilities will cost a further £172,000.

Solid Financial Position

The company has reached a very solid and satisfactory financial position due to the management policy and consistent producer support. Since the works commenced operations, the company's financial reports have revealed considerable capital expenditure to maintain and enhance service, and to receive the increased export stock of sheep and cattle offered, as well as complying with new and additional Meat Act regulations.

This consistent expenditure has been drawn from company profits and cash accumulation, without recourse to borrowed money by way of bank overdraft or loans.

Future Assured

Because of this sound position, the Report and Financial Statement records the company's ability to again meet its annual commitments of interest and principal repayment under the debenture with the New Zealand Meat Producers' Board. For the year ending September 1965 the company had paid interest to the board under the terms of the debenture amounting to £89,250. The total repayment of principal over the past four years amounts to £550,000.

Based on the fine team effort of the management and staff, the Alliance Company intends to continue its policy to serve the district to the best of its ability, and looks forward to the future with the greatest confidence.

Accelerated Freeze Dry Products

New Technique for Food Preservation Developed by Alliance

THE Accelerated Freeze Dry process is a new technique for food preservation that requires no refrigeration or preservative. This process reduces moisture content to approximately 1 per cent, giving immense reduction in weight.

The pre-cooked varieties are ready for consumption in a few minutes. Packed in hermetically sealed pouches, this food is ideal for hikers, mountaineers, etc., and a good home standby. Bulk supplies are available in 44 and 12½-gallon plastic-lined, gas flushed drums.

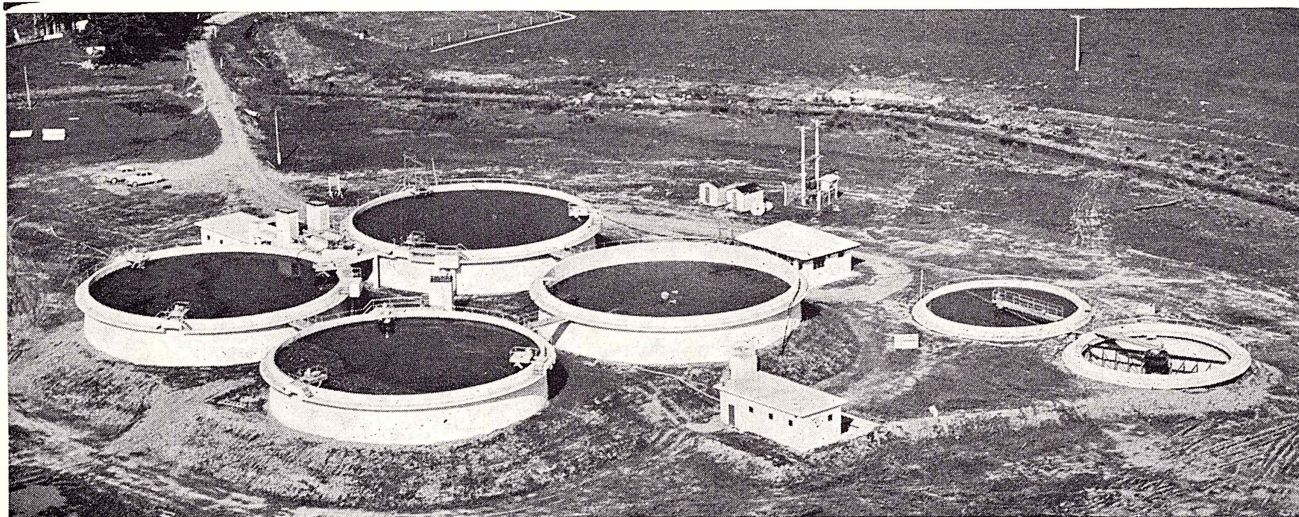
The development of the freeze dry process in New Zealand is largely due to the efforts of the Alliance Freezing Co. (Southland) Ltd, who have operated the first commercial freeze drying plant in the Southern Hemisphere. This has entailed very extensive experimental work and this has resulted in a large range of Freeze Dried products now being successfully processed at the company's modern works at Lorneville, Invercargill.

The foods are all frozen then sliced

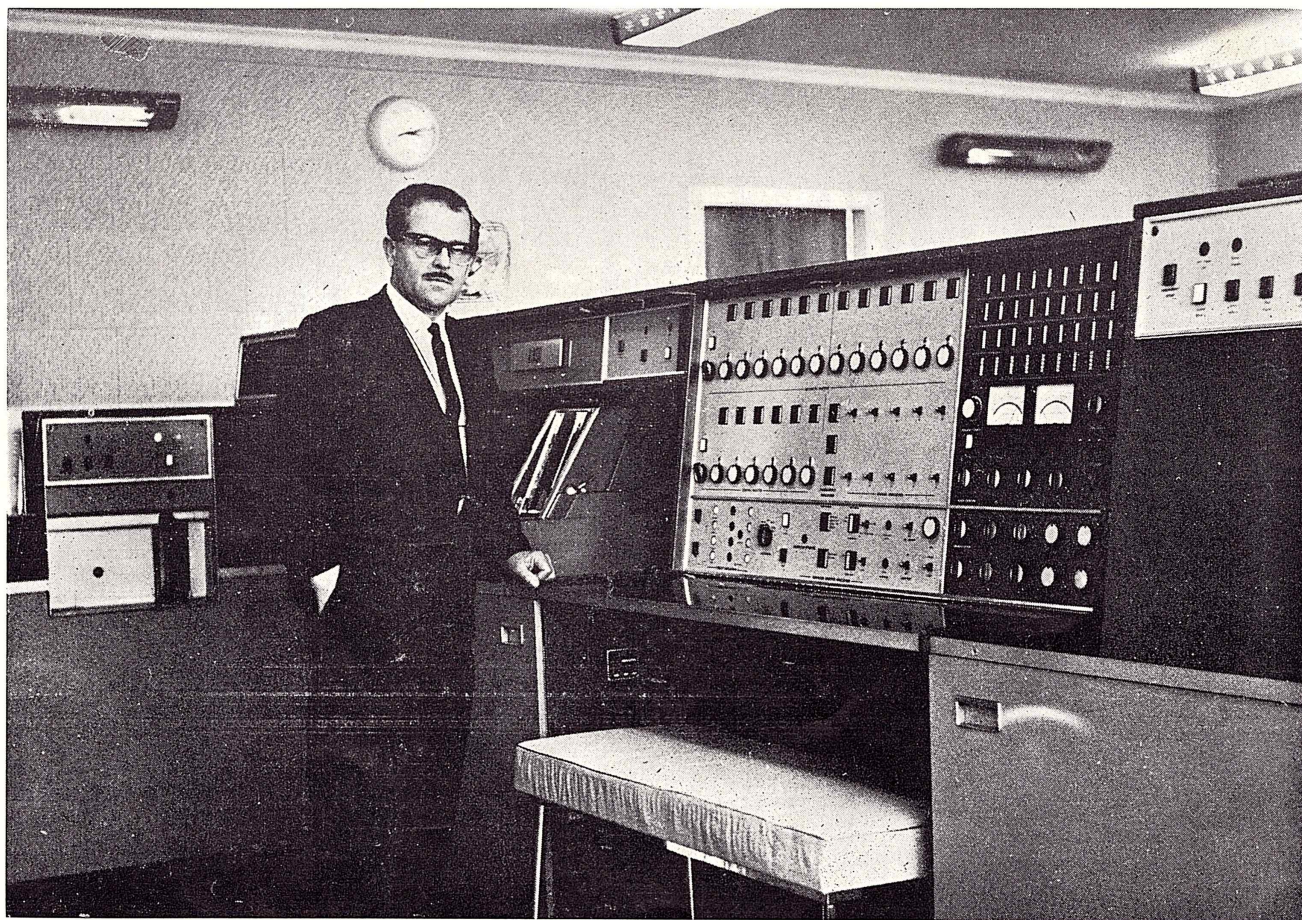
into slabs 5/8in. thick and placed on trays which are loaded into the freeze drying cabinet. The doors are closed and a vacuum drawn then heat is applied. By this means the ice is converted into vapour without passing through the liquid stage. During this process the liquid content of the food is reduced to about 1 per cent although the size and the food content remain the same. After freeze drying the cabinet is flushed with nitrogen gas as a mould growth inhibitor and the food is then packed in airtight containers.

Virtually any foods either cooked or raw can be processed in this way. These products are the ideal base ingredients to give a natural flavour to all varieties of instant soups and other instant foods, consequently they are marketed throughout the country incorporating these products.

Accelerated Freeze Dried products are now available for export overseas and inquiries from food manufacturing companies interested in obtaining supplies are welcomed.



Effluent treatment plant.



The general manager, Mr F. G. Stanley, inspects an operation at the main control panel of the computer.

PALLETISING OF MEAT AND MEAT PRODUCTS

By J. F. Barnes, B.Sc., A.N.Z.I.C.

Alliance Freezing Co. (Southland) Ltd.

IN 1964 when we had decided to build a new store and we carefully considered the economics of a single storey store with pallets compared to a further conventional multi-storeyed store, we estimated that the costs could be equated as:—

Building Cost Single Storey Store +
Pallets + Fork Truck =
Cost of Conventional Store + Con-
veyors + Chutes.

We had just previously completed a new multi-storey store and have now been able to compare the final costs of each store and the equation has been confirmed.

The dimensions of the new store are 210ft x 165ft with a clear stacking height of 18ft. Cubic capacity 600,000 cu. ft. The store is of portal frame construction (three sets in parallel) giving a floor area with only two sets of columns which is ideal for forklift operations. The floor is of prestressed concrete laid on top of on-site insulation and designed for a loading of 1000lbs. sq. ft. There are six doors each 10ft x 10ft; three opening to a rail siding and three to a roadway. The frozen cartons and carcasses are delivered to the store from the freezers by belt conveyors one at each end of the store.

By palletising before stowing it is hoped to achieve:—

1. Cheaper store operations.
2. Faster and cheaper loadouts.
3. Easy use of road transports.

The use of road transport has offered substantial savings (of the order of 20%) in cartage rates to Bluff and when fully developed road transport will enable us to reduce the overtime penal payments to the freezer hands by a very high percentage.

When designing the pallets the first criteria was for the size of pallets to fit the requirements of road transport. The idea of sending carcass pallets by rail was quickly abandoned since palletised carcasses could not meet the minimum load requirements of the railway, but carton pallets can be railed economically. The second dimensions have been decided by product requirements, but we have ensured that the pallets can be loaded into the railway trucks for stowing by hand. The space utilisation in our new store equals that of our conventional stores. However, if the store was bulk stowed it is estimated that the space

utilisation would increase by 15% over the palletised stowing.

Two basic pallets have been designed one for mutton and lamb carcasses.

Carton Pallets

The wooden carton pallets are manufactured to the requirements of N.Z.S.S. Type 1 except that the dimensions are 45in. x 60in. not 40in. x 48in. as provided for in the specification. The cartons are stacked about 4ft 3in. high and each pallet has about 40 cartons of approximately 1½ tons weight. Labour costs for loading into the store on the pallets are slightly less than the stow in the conventional store. The greatest advantages come on loadout and now almost all cartons from the Alliance Works are handled by road on pallets.

Two men, the forklift driver and a tally man, loadout at a rate of 1500 cartons per hour. Usually it would require 30 men to loadout at this rate. The rate of loadout will further increase when loadout bays are built for road transport as much time at present is lost by manouvring the road trucks as there is only access to the lorries from one side.

The carriage of cartons to Bluff (25 miles) is by ordinary flat deck vehicle with eight or nine pallets per load which in most cases is near the maximum load the trucks are licensed to carry. The pallets are covered by ordinary canvas tarpaulin. Loading to the vessel is by pallet tray and the pallet is broken in the ship's hold or alongside the "all weather" loader and the cartons are singly handled to the ship's hold by the conveyor. The stevedores report that palletised cartons give better continuity and faster rate of loading. In the case of the pallet tray there is always a load waiting at the drop of the ship's hook. As the pallets are discharged from the lorry into the wharf shed and from there conveyed to the ship's side by fork truck, the lorry traffic does not interfere with rail traffic serving the same vessel. In the case of the conveyor loading, with pallets stacked beside the conveyor there are no delays breaking into fresh railway wagons or due to shunting holdups.

On occasion railway freezer wagons have been loaded directly from the pallet and on these occasions the loading rate per man hour was six times better than from the conventional stores.

Because of the irregular shape of many cartons, most pallets have had to be strapped. Wooden edges which are

strapped along the top longitudinal edges provide tight binding and also ensure an even surface for landing the next pallet on. At present we are using steel strapping but we are conducting experiments with a polypropylene material which is supposed to be self tightening. The loosening of the strapping on the bottom pallets is a problem as each has to be tightened before loadout. The polypropylene material is non-rusting and can be reused many times. Permanent strapping material on the pallets is being considered in the form of resilient webbing which is available in continuous bands or fitted with hooks or buckles.

The biggest problem with carton palletising has been the sorting of the many varieties of products since it is obviously necessary to have each pallet made up from cartons containing the same product. For very small lines sorting is done on the conveyor feeding the store, and other larger but still small lines are first stacked on to pallets and resorted when sufficient of the various lines have accumulated. The problem is a real one and one to which no satisfactory answer has been found.

Another problem which has to be solved is the matter of branding. It is possible to brand some lines prior to palletising. For others we have been able to stack pallets so that one end has been available for branding but it is not possible to brand on both ends of the carton without breaking the pallet load. Nor is it possible to stow on the pallet with any one end always outermost.

Flat pallets have found unsuitable for stowing lamb cuts cartons as the lower cartons have insufficient strength to carry the stack above. For these pallets removable posts have been designed which will support the upper pallets without the load being borne on the partly empty lamb cut carton. Sheep and lamb hearts which have been individually frozen present a similar problem and this has been solved by arranging that pallets or hearts are always on the top of stacks. Lamb brains which have also been individually frozen and packed in small inner cartons have shown a tendency to slide sideways and this has been overcome by very tight strapping. Some bone in bef cuts have readily pierced their cartons when they had weight of pallets applied and in this case it has proved necessary to ensure that only accurately sized cartons have been used.

Lamb and Mutton Pallets

The steel pallets are each 7ft 5in. x 3ft

3½in., comprising four longitudinal bearers with posts 5ft 10in. high. Each pallet holds approximately 80 lambs (about 1½ tons) or about the equivalent weight of ewes. As with cartons, stowing carcasses on to the pallets from a mechanical conveyor is very convenient. If necessary sorting into grades is easy and quick. The spacing of the bearers as shown in the plans is important, since this allows the bustle and shoulder of the carcase to recede into the space between the bearers, making for a very steady stow on the first layer and maximum utilisation of the cubic capacity of the pallet. The relatively narrow width of the pallet is also important. The fork truck is fitted with a side shift and this enables the pallets in the store to be tightly packed together. With a wider pallet than 3ft 3½in. when the shorter lambs are stowed on it the whole width of the pallet would not be used. The narrow pallet also allows the pallets to be presented endwise inside a freezer wagon. Then should it be necessary to break the pallets for a loadout by rail the pallets can easily be unloaded in the wagon provided that the length of the carcasses is no greater than the door of the wagon. Loadouts of carcase meat on pallets has so far been only on an experimental basis.

When loading to Bluff by lorry the load is covered by a quilted insulated cover. This cover is made up of three layers: plastic/polystyrene/canvas and is laced and tied to make the cover as airtight as possible. Each articulated lorry can take seven pallets and will pull a trailer carrying five pallets.

Loadout rate with two men should reach 2000 lambs per hour. It will normally take 40 men to loadout 2000 lambs in one hour.

At Bluff the pallets are placed by forklifts beside the conveyors for the all-weather loader and broken by wharf labourers on to the loading belt. The empty pallets are loaded on to the next truck and returned to the works.

The meat has arrived at Bluff in perfect condition and the stevedores report that there are no real problems with pallets at the all-weather loader. Taking the pallet into the ship's hold could present difficulties in moving the empty pallet aside in the hold after the carcasses have been taken from it. The weight of the pallet is 300lbs. and the dimensions are such that it is awkward to handle by hand. When not loading through the all-weather loaders the pallets will be

broken at the ship's side and made up into slings in the usual way.

The lamb pallets were designed to go across the deck of the road trucks but this has proved unsatisfactory due to carcasses shifting during transport. They are now loaded longitudinally along the truck tray. This trouble could be minimised by using plywood spacers and this may in fact be necessary when transporting ewes which are too long to allow two pallets loaded sideways across the deck of the truck.

Expendable Pallets

The full benefit of palletising meat will only be obtained when it is possible to palletise the meat at an early stage in production and deliver it to the overseas destination (wholesale or retailer) still as a pallet unit. The cost of the usual pallets and the expense of returning the pallets to New Zealand would offset most of the advantages to be gained should this become general practice.

Expendable cheap pallets can be manufactured of reinforced cardboard or similar material and without bearers or normal provision for fork entry. Alternatively a normal flat, wooden pallet can have the elements imparting rigidity omitted or considerably reduced to cheapen the pallets.

Either of these types of pallet can be handled by a squeeze clamp attachment to the forklift. There also are available forklift attachments whereon the load is transported on a polished steel plate which takes the place of the fork

truck forks and is transferred to and from stock by a push/pull mechanism which grips a lip along the side of the pallet nearest the fork truck mast. There appears to be no real reason why an expendable pallet cannot be designed, at least for cartoned meat, provided the parties concerned are prepared to provide the necessary lifting machinery.

Containers

There has been much discussion in the press recently about containers and it has been announced that the Exports and Shipping Council are intensely interested in the containerisation for export of produce from New Zealand. Since containers are an extension of the principles of palletisation and can be considered to be very large covered pallets, some comments may be appropriate.

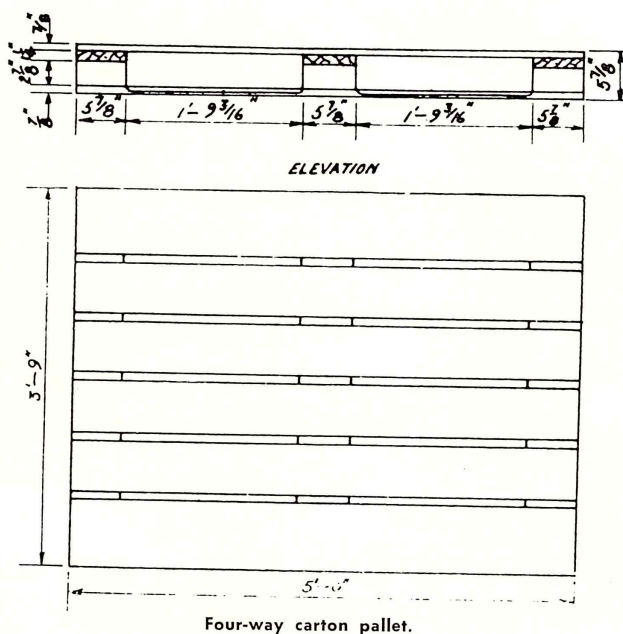
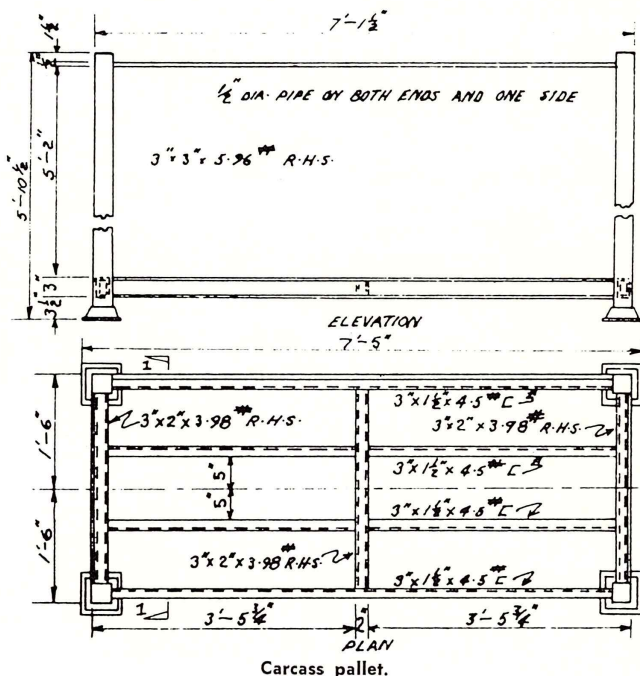
The use of containers for handling non-refrigerated cargo is well developed in the shipping trade. This is so particularly in America where there are extensive container networks with Europe and with Honolulu. Containerisation of frozen produce is limited and the first shipment of containerised frozen cargo from U.S.A. to Northern Europe was due to be made this month. The containers are 8ft high, 8ft wide and 20 or 40ft long. They are refrigerated by Freon 12 and insulated by a $3\frac{1}{2}$ in. layer of polystyrene. The outside wall is aluminium painted with enamel and the inside walls are of plywood. Containers holding frozen material could be designed to use the refrigeration and/or insulation facilities of the ship.

Containerisation has a huge and insatiable appetite for capital investment since specially designed or modified ships, special lifting gear and berth facilities and also integration of the feeder services are required. Standard ISO containers are too wide to be handled on the New Zealand railway system where they pass through tunnels.

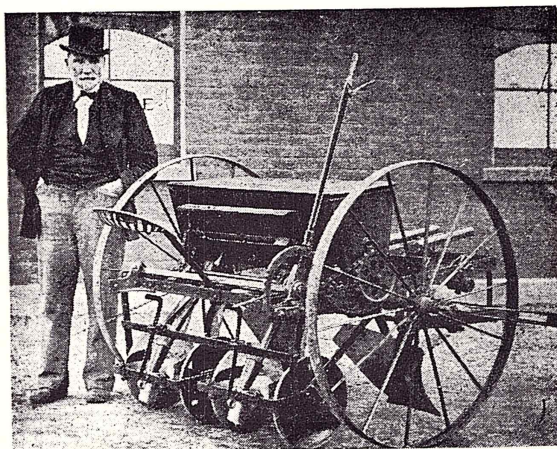
The concept of containerisation implies that space can be deliberately sacrificed for turnabout speed. Space losses amount to 30 or 40% after allowing for deck cargo (in itself troublesome), but turn-around of a fully containerised ship can be reduced to $1\frac{1}{2}$ days. A voyage length of 3000 miles maximum, plus suitable cargo both ways, are necessary for economic operation.

At least 20,000 containers each 8 x 8 x 20ft would be required to handle New Zealand's meat export (assuming a four-month turn-around) as well as extensive developments at ports and freezing works.

At the works operating level containers offer little scope for cost savings without extensive rebuilding programmes but experiments with modular prepalletisation, involving strapping several pallets together to form in effect a standard sized compartment container, which are being conducted by shipping companies, may answer this problem. In some places containers are stowed with palletised goods and while this could be of value to works operations the double loss of shipping space due to container and pallets could prove expensive.



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AWARUA

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FREEZING works apart, one of the most reliable indicators of Southland's primary production is the booming Southland Co-operative Phosphate Co. Ltd at Awarua, about six miles south of Invercargill. And booming is the operative word.

£500,000 Programme

Its record of growth has been spectacular, and with the planned and current expansion programme estimated to cost £500,000, the board of directors have shown that they are alive to Southland's terrific potential.

The establishment of the phosphate works has been of considerable benefit to Southland farmers. Not only has there been a big saving in transport costs — supplies previously came 140 miles from Dunedin — but enterprising leadership has resulted in other savings through direct importation of bulk shipments of potash previously shipped to Bluff in bags.

Added to these lower costs is the rebate to the farmer — shareholders which for the last two years amounted to £1 10s per ton. Current prices are £9 17s a ton for serpentine super in bulk and £10 10s for superphosphate in bulk.

Expansion Without Borrowing

Such is the support given the works by the farmers of Southland and West Otago that the company has been able to meet expansion costs without having to borrow.

Sound planning at the start of the project in 1956 and progressive policies pacing the Southland boom has placed the company in this happy position today. But a glance at the earlier figures gives some of the story behind this farmer-owned co-operative.

In the first full year of operation the company produced 74,420 tons of fertiliser as compared with 164,051 six years later (1965-66 season). At the mid point this total was 98,627. In 1960 bag-

ged deliveries totalled 52 per cent of all sales but today they account for only 34 per cent.

Originally designed to produce 100,000 tons of superphosphate, the works output has risen to 60 per cent more than this because of increased demand for mixtures containing serpentine, potash and trace elements.

Yet the staff of 90 is about the same as when the firm started. The general manager, Mr S. R. Gay, attributes this greater productivity per man hour to greater efficiency and increased mechanisation in all departments, and the swing toward dispatch of fertiliser in bulk.

Capacity to be Doubled

A big expansion programme now in progress should bring capacity up to 300,000 tons a year in 1967. An additional sulphuric acid plant and BM14 grinding mill are being installed this year. The third phase, planned for early 1967, involves a new Broadfield acidulating plant.

With the installation of additional bulk despatch units, extra storage capacity for fertiliser awaiting delivery and a new road weighbridge, the company will be able to meet the fertiliser requirements of Southland and West Otago for the foreseeable future, Mr Gay said.

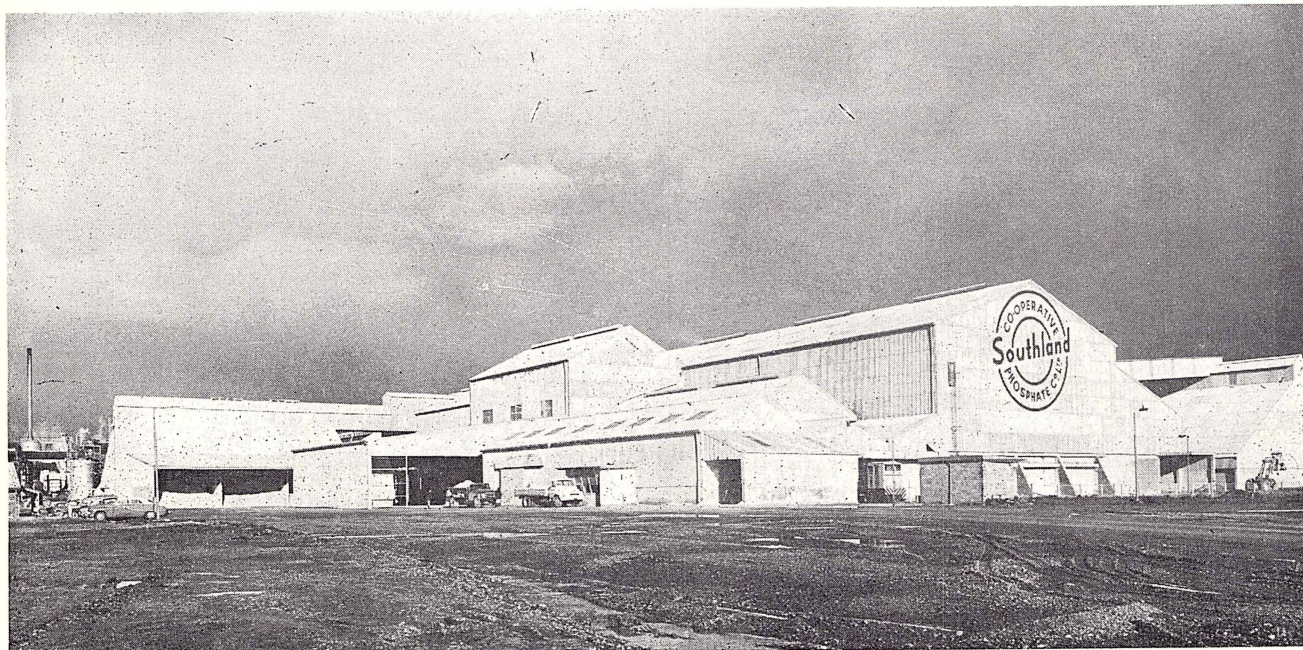
There's plenty of room for expansion. The company's Awarua property totals 200 acres of which only 24 are taken up by the works. An airstrip for light planes is provided for those who wish to use the works as a base for aerial topdressing.

Special Services

There are plenty of other services offering too.

Quite apart from the basic and staple demand for serpentine super, superphosphate, aerial super and reverted super a farmer customer can get any mixture that he requires. Some of these, said Mr Gay, are quite big orders, while some amount to only a small tonnage.

The increasing use
of fertilisers is having
a marked effect on
primary production in the
province.
To meet the ever-growing
demand the company
is embarking on a
£500,000 development
programme to double
output.



The Southland Co-operative Phosphate Co. Ltd works at Awarua.

They include the addition of trace elements to counter cobalt or other deficiencies in Southland soils, DDT, hormones as additives, insecticides and many more combinations that fill page after page on a monthly production schedule. The permutations and combinations looked formidable enough to a layman but later checking with users has confirmed that the scope offered by the Southland Co-operative Phosphate Company is indeed wide.

A Canterburyan, Mr Gay reckons that the Southland farmers are good scientific farmers who take the trouble to find out their fertiliser requirements and ask for the mixture to fill their particular needs. The company caters for clients in all parts of the province "as far away as Glenorchy" and maintains bulk depots at Mossburn, Winton, Wyndham and will soon have one at Waipahi (north of Gore).

Heavy Demand

To meet a demand that has been described in a farming journal as "terrific" the company this year imported through Bluff (12 miles away) 78,000 tons of phosphate rock, 16,000 tons of potash and 15,000 tons of sulphur. In addition, deposits of dunnite, suitable for serpentine superphosphate, have been found at nearby Greenhills, and from the quarry there 28,000 tons were taken. This find was a major windfall for the company, as the previous serpentine came from Mossburn — nearly 70 miles away.

Internally the company is fully self-supporting.

It maintains its own staffs for a modern laboratory, drawing office for the draughting of plans, electricians, carpenters, painters, plumbers. The key personnel were stable, said Mr Gay, although in the works the supply was usually regulated by the freezing works season. In the past there was a tendency to find the peak season was spring but this has now levelled out to a year-round demand that is forcing the company to keep expanding.

Alert to what is going on overseas in this field the Southland Co-operative Phosphate Company is also willing to "test the market" by marketing such new fertilisers as a triple superphosphate widely used overseas. This could lead to the installation of a phosphoric acid plant, if the market warrants such a step.

The works was built with the help of a £1,310,000 producer capital loan from the New Zealand Meat Producers Board, mostly at 2½ per cent and some at 4½ per cent. Already £550,000 has been paid back in addition to the capital works of over £268,000 last year and £200,000 in rebates.

In common with other Southland enterprises, local farmers also supported the formation of the company with heavy subscriptions to something they could see was possibly the key to increased production within the province.

The result is a massive ever-growing modern plant returning a steady cash

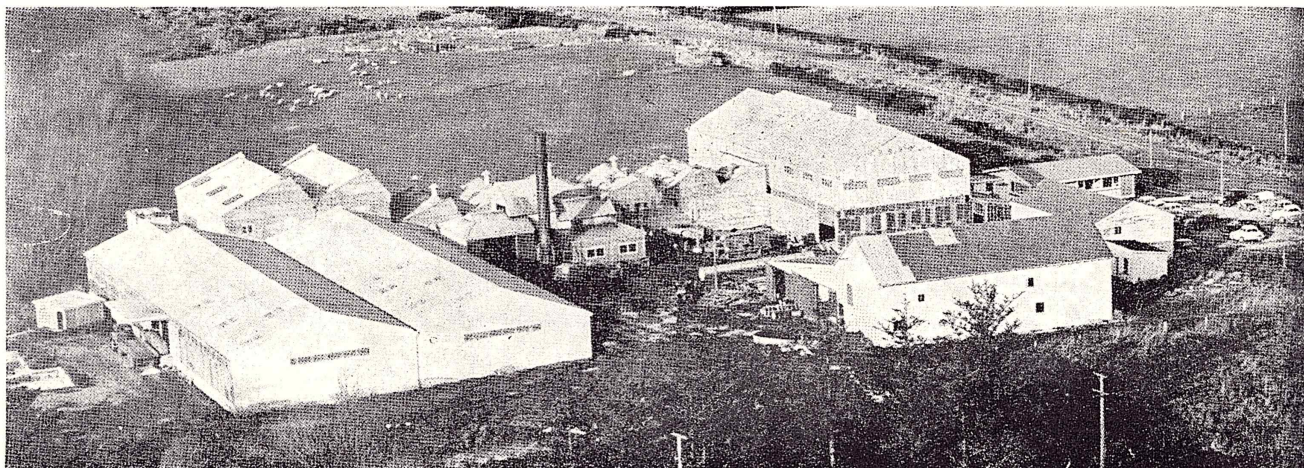
rebate to the farmer owners as well as supplying an extraordinarily wide range of products tailored to the particular demand — area, farm or even paddock. Its establishment has also proved a great lift for the Southland Harbour Board's port at nearby Bluff. Inward tonnages have risen sharply since the formation of the company. Then too the same inward increase must also be directly responsible for the increase in outward tonnages of good Southland primary produce grown with the aid of scientific applications of superphosphatic fertilisers.

Annual Savings £100,000

Since the company has been in operation (1958) the estimated saving on freight, compared with obtaining a similar article from Dunedin, has been more than £100,000 a year. This year for instance Mr Gay estimates the saving to be £160,000. This is not the least of the savings to the province as a whole that has come from the establishment of the Southland Co-operative Phosphate Company Ltd.

Already the works is the biggest chemical fertiliser plant in the Southland-Otago area.

With the future growth likely to be accelerated it could well become the biggest plant in the South Island. Everything points to the brightest possible future.



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J. A. N. MATHESON
Managing Director.

J. MATHESON & CO. LTD.

KENNINGTON

ADDRESSES:

Postal **KENNINGTON**
Rail **ONE TREE POINT**

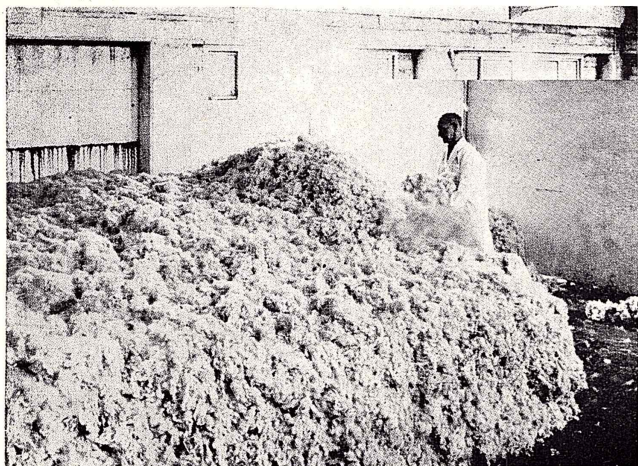
TELEPHONES:

(Invercargill Exchange
Dial **KEN 823** (2 lines)
821 (after hours)

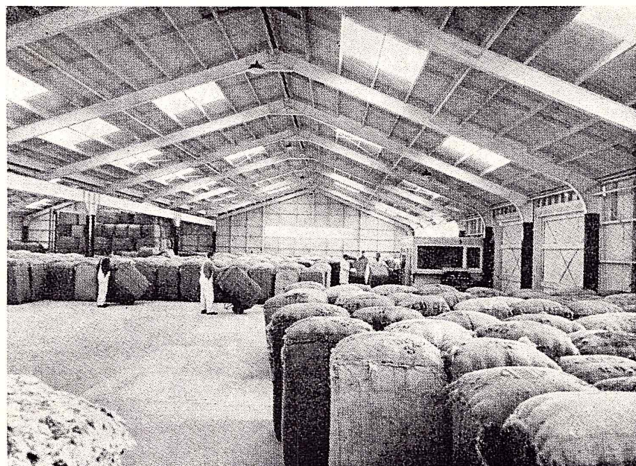
SCHEDULE OF CHARGES
ON APPLICATION

SHIPPING SPACE
ARRANGED

Agents:
**ALLIANCE ASSURANCE
COMPANY LIMITED**



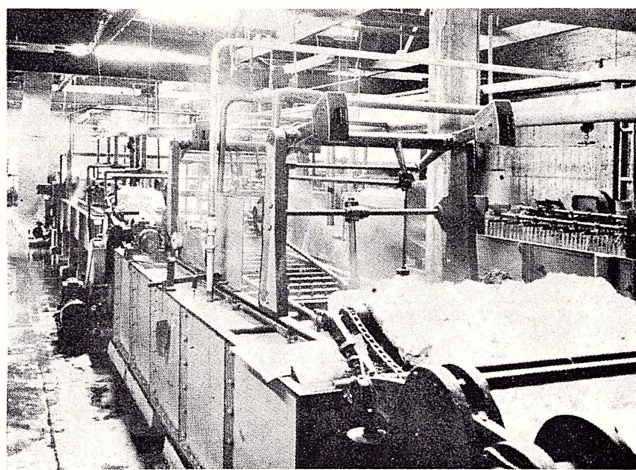
Dried scoured wool department.



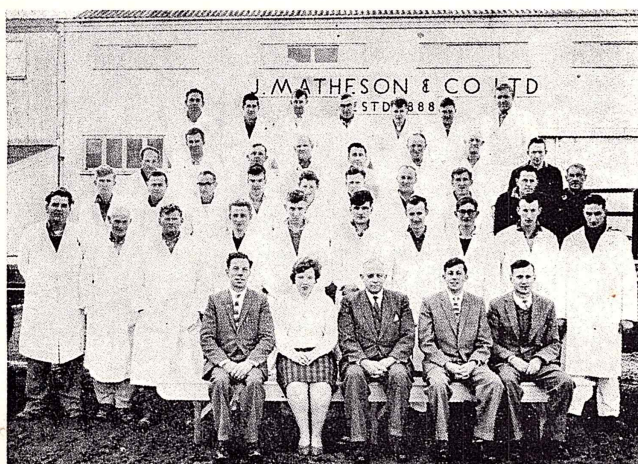
Inward wool receiving department and recasing department.



Greasy wool sorting department.



Wool scouring and bleaching department.



The management and staff.



The office.

J. E. WATSON & CO. LIMITED



Head office, Tay Street, Invercargill.



Saddlery, canvas and leather department, Dee Street, Invercargill.

J. E. WATSON & CO LTD, STOCK AND STATION AGENTS, IS ONE OF THE LONGEST ESTABLISHED AND MOST PROGRESSIVE FIRMS IN SOUTHLAND. AS THE PROVINCE HAS DEVELOPED, J. E. WATSON & CO LTD HAVE EXPANDED AND DIVERSIFIED TO MEET CHANGING NEEDS.

MAJOR ROLE IN SOUTHLAND'S DEVELOPMENT

DIVERSIFICATION OF WATSON'S OPERATIONS

NO mercantile firm in Southland has played a greater role in Southland development than has the long established business of J. E. Watson and Co. Ltd. Founded in 1887 as Tothill and Watson Ltd, it has from the beginning identified itself completely with the farming community, and the story of the progress of the firm has been the story of the progress of Southland.

ANGLO-SCOTTISH ALLIANCE

The original partnership was an alliance of England & Scotland — Mr G. C. Tothill the Englishman and Mr J. E. Watson the Scot. Mr Watson, notwithstanding his Scottish origin, was an intensely patriotic man and held the rank of Captain in the Mercantile Volunteers. His lieutenant was Mr John Gilkison who was destined to become head of the firm and a leading figure in the business and commercial life of Southland.

FORCE IN COMMUNITY

From the beginning Watson's have been a force in the mercantile life of the community and progress was steady right up until the Second World War, with the exception of the depression years of the early thirties when the mercantile firms in common with all

other business suffered from low prices and a falling market. Mr Watson's death in 1916 marked the beginning of the Gilkison regime in the firm when Mr John Gilkison became managing director, a position he held until his death in 1965 when he was succeeded by his son, Mr A. F. Gilkison, who had been general manager.

WOOL SALES

The post-war years brought rapid expansion to the firm's business and an indication of the speed of its development is given by the amount of wool sold by J. E. Watson's over the last 12 years. In 1953-54 the firm sold 5931 bales; in 1965-66 it sold 17,302 bales.

MEAT HANDLING

A similar spectacular increase in business is to be seen in the amount of meat handled by the firm. In 1953-54 the total sheep and lamb killings handled by Watson's was 127,000 carcasses; in 1965-66 it had risen to 360,000 carcasses.

MARINE AGENCIES

The firm started in business as shipping agents in the early thirties, with the Blue Star its first agency followed by the Port Line. From those two it has built up a considerable list of agencies

with the result that the name of J. E. Watson's is known in shipping circles all over the world. Today it handles from 50 to 60 per cent of all the shipping that goes through the port of Bluff, both coastal and overseas. The opening of the new island harbour at Bluff a few years ago and the installation of the meat-loaders has resulted in a tremendous acceleration of the firm's business and in the last few years the firm's Bluff staff has been doubled. In addition to meat the firm handles all the bulk shipments of wheat that go out from the port.

Shipping lines for which J. E. Watson's are agents are the Blue Star Line, Port Line, G. H. Scales Ltd, Bank Line, Overseas Tankships, Japan Line, Mitsui O.S.K. Line, China Navigation, Northern Steam Ship Company and the Canterbury Steam Ship Company.

BRANCHES THROUGHOUT SOUTHLAND PROVINCE

Apart from its fine head office building in Tay Street the firm has established itself in various parts of the province with a big seed-cleaning plant at Gore, a fertiliser plant and bulk store at Riversdale and branches at Gore, Riversdale (in addition to the fertiliser plant), Otautau, Waikaka, Wyndham and Queenstown. The firm also owns a substantial experimental farm at Lowther.



View of the company's Otatau establishment showing, from left to right: Grain, seed merchandise store, bulk fertiliser store and fertiliser mixing store.

WATSONS INTRODUCE CARBONATE OF LIME

HOW WRONG CAN YOU BE?

The following is an extract from the report on the specimen of carbonate of lime sent for analysis: "I have analysed the sample of supposed crushed lime sent to me by you on the 25th March. The substance is a crushed limestone which has not been burnt and which, therefore, contains no free lime and is therefore useless for all purposes for which lime is used . . . The value of this substance is nil."

But, as events turned out, the expert could not have been more wrong. The valueless substance was destined to transform the face of Southland.

WATSONS were also one of the principal agencies through which carbonate of lime was introduced to Southland, and as a consequence to the rest of New Zealand, as a soil conditioner — and it is an accepted fact that it was carbonate of lime that made Southland what it is today.



Wool and seed cleaning stores, Invercargill.

LONE FIGHTER

The missionary for carbonate of lime was George Macindoe, a man who for many years fought a lonely fight, not only against those who scoffed at his ideas, but also against a physical disability which made him a cripple. A man of indomitable spirit and an un-failing sense of humour, he lived to see his ideas, derided for so many years, completely vindicated. He lived to see the province of his adoption launched firmly on the road to prosperity, mainly through his advocacy of the use of carbonate of lime.

J. E. WATSON'S SUPPORT

And behind him in his advocacy all the way was the firm of J. E. Watson and Co. Ltd. which, convinced of the case that Macindoe presented to the farmers for the application to their land of carbonate of lime instead of the ordinary burnt lime, agreed to supply

carbonate whenever an order for lime was placed. But both Macindoe and the firm found that prejudice against their commodity was strong and unreasoning. Some of the salesmen connected with firms not using carbonate of lime made a point of telling the farmers that their manure contained no carbonate and was therefore much more valuable.

SAID TO BE WORTHLESS

In 1905 a farmer sent a sample to an analyst who reported that the material was worthless, hinting that the farmer was being defrauded. The farmer refused to pay for the carbonate of lime and a court case followed, the plaintiff being J. E. Watson and Co. Ltd.

The case, which was heard at Gore, lasted three days, the chemist and others giving evidence in favour of burnt lime. The use of carbonate of lime was, of course, defended and witnesses who had used carbonate of lime gave testimony to its value.

The Magistrate reserved his decision, giving it about a month later in favour of carbonate of lime.

INDUSTRY'S TURNING POINT

About this time the Minister of Agriculture threatened to withdraw the free railage of lime if carbonate of lime was sent. This decision was reversed after an interview. The Magistrate's decision and the Government's consent to give free carriage of carbonate of lime were the turning point in the industry and as the years went by Macindoe saw lime works established all over the Dominion. News of the controversy and the court case reached Australia and similar experiments were soon under way there. The use of carbonate of lime on pastures has been vindicated a thousand times over since the finding of the Magistrate at Gore in 1906.

WHAT OF THE FUTURE?

J. E. Watson & Co. Ltd is a completely Southland-owned firm with full confidence in the potential of the province and the capacity to adjust its own development to the changing needs of the district.

WITH a regional population of 101,000 and approximately 6700 farms which include 1½ million acres of developed plain-land lying within a 60-mile radius of Invercargill, Southland is progressing on a scale of development unparalleled in New Zealand.

The average lambing percentage is 112 and the sheep population has increased over the last 25 years from 1,571,000 to 6,650,000, of which 4,800,000 are breeding ewes.

In the next 20 to 30 years primary production in Southland is likely to increase to a greater degree than anywhere else in New Zealand and it is forecast that the port of Bluff will by 1985 be the largest meat and wool exporting port in New Zealand.

KEEPING PACE

The firm of J. E. Watson & Co. Ltd has stepped up its development plans to keep pace with this tremendous potential and the manner in which it is facing the challenge of the future has earned for it the confidence and loyalty of its farmer clients throughout the province.

AUTOMATIC MIXING PLANT

In 1957 the company installed in its Riversdale fertiliser store the first automatic fertiliser mixing plant in Southland. This was followed in 1962 by a second improved plant at Otautau, and since then the company has extended its operation until today its establishment in Otautau is the largest of its kind in Southland. To cope with the ever increasing demand of the Riversdale area the company has let a contract for the erection of a new bulk fertiliser store which when completed towards the end of 1966 will have a maximum storage capacity of approximately 2500 tons.

ACCENT ON SERVICE

The output of the fertiliser store at Riversdale is hinged mainly on Southland serpentine super, but the firm is also able to supply what farmers want. Trace elements and mixture compounds are available. There is no need now for farmers to gamble with the weather when they can have their requirements on the day they want them — and also there is no worrying about demurrage and no unloading charge.

WOOL STORE

To cope with the steadily increasing wool business the firm has built in Annan Street, Invercargill, a wool store covering a total area of 1½ acres. This is a modern store with every facility for handling and showing clients' wool to the best advantage and also to ensure the best handling of the wool entrusted to the firm's care.

PROGRESSIVE POLICY

J. E. Watson & Co. Ltd is today one of the most enterprising and successful mercantile firms in Southland and is very conscious of the tremendous potential of the province it serves. Additional agencies have been established throughout the province and the firm's representatives have sought business in every corner of the province — the results have been spectacular and have fully justified the company's increased investment in the province and its vigorous and forward looking policy.

RETAIL BUSINESS

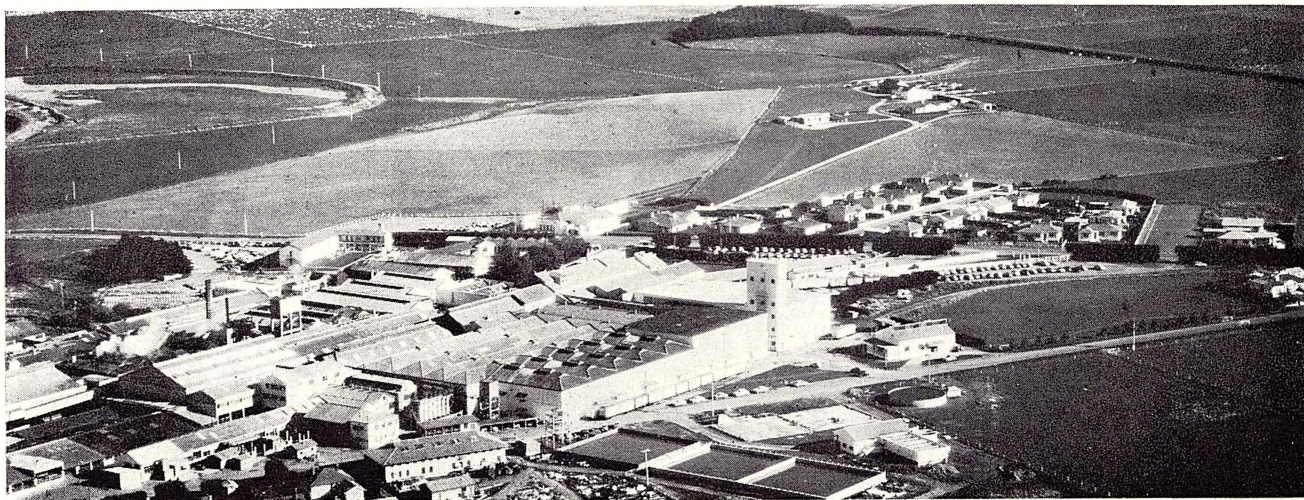
In its retail business J. E. Watson & Co. Ltd have also opened a fine new shop in Dee Street which incorporates its saddlery, canvas and leather manufacturing and travel goods departments.

The company also proposes erecting a new administration centre and retail shop in the main street of Gore in the very near future, it is hoped, if necessary permits can be obtained, to have this building ready for occupation towards the end of 1967.

EXCLUSIVELY SOUTHLAND

J. E. Watson & Co. Ltd is an exclusively Southland firm without any control or influence from outside to dictate its policy or development. Every member of the directorate is a Southlander, and almost without exception the board consists of members of the staff or ex-employees. The board of directors is as follows: Messrs A. F. Gilkison (chairman and general manager of the company), R. T. Stewart (deputy-chairman and former manager of Invercargill branch), W. H. Sadlier (former manager at Gore), S. W. Turnbull (manager, Gore), H. R. Wilson (manager, Invercargill branch), J. N. Armstrong (manager Shipping Department), W. H. Norris (manager, Seed Department), L. S. Gilkison (farmer) and B. Hensley (company secretary).

Mr A. F. Gilkison has been general manager since September 1958, when his father, the late Mr John Gilkison, retired. He became deputy-chairman at the same time and succeeded to the chairmanship on the death of his father in 1965.



Makarewa Freezing Works.

SOUTHLAND FROZEN MEAT AND PRODUCE EXPORT CO. LTD.

Head Office: ESK STREET, INVERCARGILL. Phone 86-139

Works: MAKAREWA FREEZING WORKS. Phone MKW-869

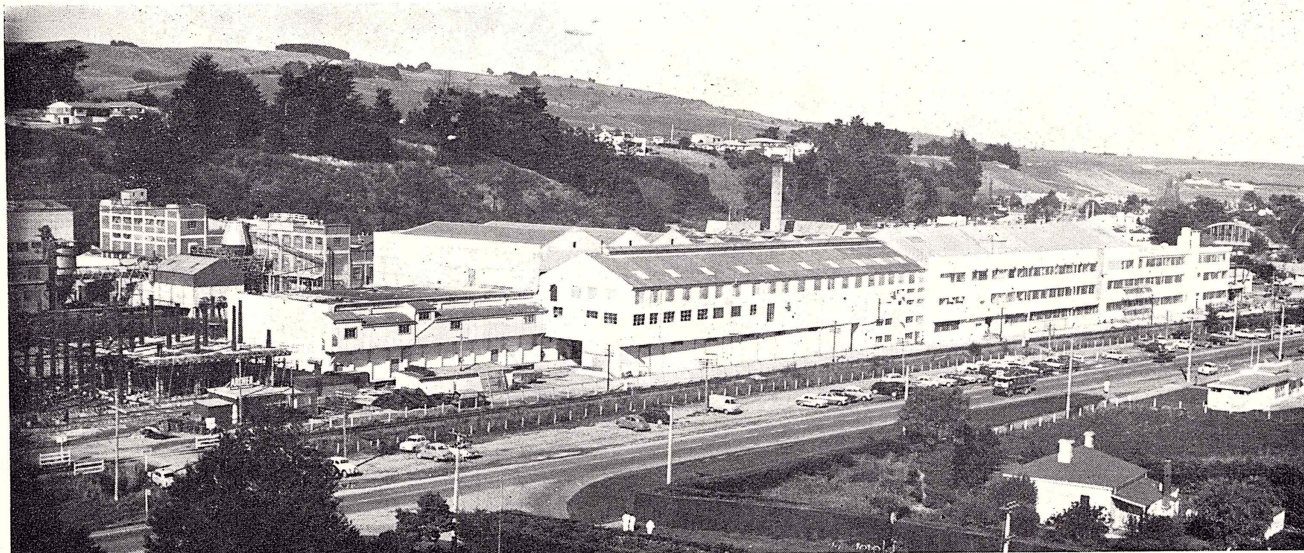
MATAURA FREEZING WORKS. Phone Mataka 1

THE Southland Frozen Meat and Produce Export Company Ltd., is truly a pioneer in the meat freezing industry in Southland. Although there were meat preserving works in the Province as early as 1869, it was in 1881 that steps were taken to establish the freezing meat industry in Southland by the formation of The Southland Frozen Meat and Produce Export Company Limited. The original freezing plant owned by the Company was situated at the Port of Bluff—the slaughtering being done some miles inland at a point not very far from the existing Makarewa Works.

In 1893 the Company opened its Mataka Works to cope with the rapid increase in the sheep population of Southland and to serve the Eastern portion of the Province. It was not until

1912 that the Makarewa Works was opened on a site on the banks of the Makarewa River approximately eight miles north from the City of Invercargill. The growth from that period on until the late 30's was only steady, but in the past 20 years Southland's expansion has been phenomenal.

With a carefully planned programme of expansion in facilities at Makarewa and Mataka Works, The Southland Frozen Meat and Produce Export Company Limited is keeping pace with the rapid increase in primary production in Southland. The five and one half chain works at Makarewa is capable of killing 17,800 lambs and 250 cattle daily while the four chain works at Mataka is capable of killing 14,000 lambs daily. This upsurge in production can be seen by the studying of the following killing figures:



Maitara Freezing Works.

SHEEP AND LAMB KILLINGS

The Southland Frozen Meat and Produce Export Company Limited
Makarewa and Maitara Works

Sheep & Lambs

1883	.....	6,550
1890	.....	58,326
1900	.....	118,327
1910	.....	325,946
1920	.....	245,741
1930	.....	486,774
1940	.....	1,011,496
1950	.....	1,544,088
1960	.....	2,498,921
1963	.....	2,293,236
1964	.....	2,241,960
1965	.....	2,371,186

At present beef killing operations are concentrated at Makarewa but, with a dramatic increase in cattle numbers forecast, plans are already on the drawing board for a modern beef abattoir to be built at Maitara. A continuing demand from all over the world for bone in and boneless cuts of Lamb, Mutton and Beef has meant that in addition to planning this new abattoir, new chillers, fabricating room with production lines, carton freezing and carton storage are required at Maitara.

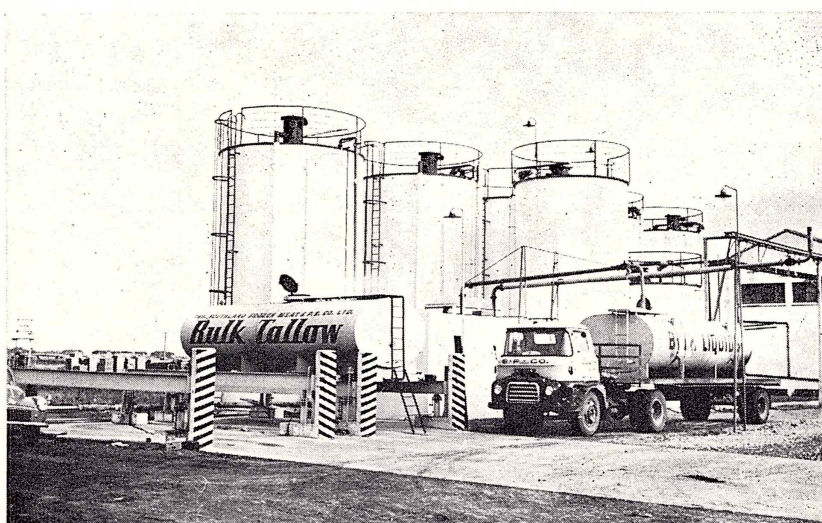
Carcases and cuts of all types of meat are being exported by The Southland Frozen Meat and Produce Export Company Limited to all of the traditional markets and to many new markets each year. Special cuts are being airfreighted fresh for the luxury hotel trade in the Far East. Every care is taken in packaging and presentation

of the wide range of meat products and frequent alterations are made to meet changing customer requirements.

Since the introduction of the meat conveyor loading system at the Port of Bluff in 1963, the meat exporters in Southland have been given not only the promised security from weather delays but a more satisfactory and efficient loading programme. This new innovation has greatly assisted the freezing works in coping with the continuing increases in export production.

The Company has always attempted to process its by-products to the highest possible standards. As a result the wool and pelts handled at the Makarewa and Maitara Works are eagerly sought after in the world's markets.

With one of New Zealand's largest bulk tallow storage areas at the Makarewa Works, the Company has kept right up to date with modern handling trends. Road tankers with 10 to 12 tons capacity can load and be despatched to the Port of Bluff every 15 minutes.



Bulk tallow storage tanks at the Makarewa works.

100 YEARS OF SERVICE TO SOUTHLAND

NICHOL BROS. & CO. LTD.

Stock Food Manufacturers — Grain and Seed Merchants

MERSEY STREET - INVERCARGILL

P.O. BOX 12

PHONE 3029



Mr E. S. Nichol, company chairman.

IN 1965 Nichol Bros, one of Southland-Otago's oldest established firms, celebrated its centenary marking 100 years of invaluable service to the area.

The firm was founded by Samuel Nichol who, after trying his hand at various kinds of work, settled in Bluff and was appointed agent for the McMeekin & Blackmore Steamship Co. This agency later expanded to include the New Zealand Shipping Company, and also Cobb & Company who operated a coach service for passengers and mail between Invercargill and Bluff.

In 1865 Sam took into partnership his brother-in-law, G. E. Tucker, thus founding the firm of Nichol & Tucker. The potential for trade grew steadily with the development of the Northern Southland goldfields and the entry of steamships into Bluff Harbour. After the goldrush came the inevitable slump which placed Sam into a perilous financial position. However he managed to persuade the owners of ocean-going steamers to make Bluff a regular port of call on the trade route, and business once more flourished.

The opening of the Invercargill-Bluff railway line brought another substantial increase in trade, and Sam took advantage of this by building grain and wool stores on land serviced by private sidings. The Provincial Government found that operation costs were in excess of revenue and decided to lease the railway, and in 1869 Sam Nichol was granted the lease.

Sam decided that a small margin with a large turnover was more profitable than a large margin with a small turnover, and reduced freight rates accordingly. A handsome profit resulted from this venture, but the Government refused to renew the lease when it expired in 1870.

In 1874 George Nichol joined his brother's business and a branch was opened at Invercargill under his management.

Sealing and whaling operations had been carried out along the coast from as far back as 1792 and in this Sam saw yet another opening for trade, as at that time whale oil was one of the world's most valuable commodities.

In 1874 he purchased the Chance, and

in 1876 the Celestia. Between them these vessels provided strong competition for the American whalers, and made substantial profit for the company.

The discovery of mineral oil in America caused a heavy fall in the price of whale oil and Sam gave up this now unprofitable venture. The Chance was laid up as a coal hulk and the Celestia was used to carry coal from Newcastle.

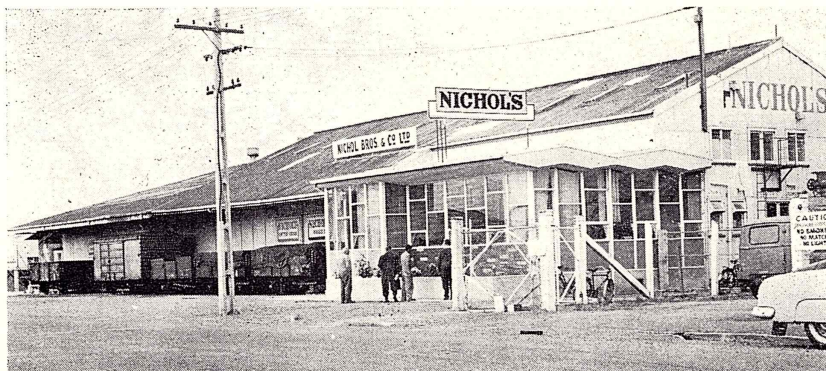
This was a time of great expansion for Nichol Bros as they handled most of the coal brought into Bluff. Besides the coal shipped from Newcastle consignments came south from Westport.

The highlight of the company's dealings with grain came during the Boer War, when large gangs of men were employed to bag Southland oats in preparation for shipment to South Africa.

Stevedoring was another important feature of the company's activities, especially in the days when ships would lie in Bluff for two or three months waiting to load the new wool clip as no storage facilities were available.

George was the first of the original partners to die. For seven years after his death the firm carried on without alteration until 1914 when the partnership was dissolved and the Bluff business and all its activities reverted to Sam Nichol. Harry Nichol, George's son, took over the Invercargill branch until 1946 when he sold it to Sam's grandson, E. S. Nichol.

Sam's only son, Ernest Nichol, joined the family business in 1897. When the First World War broke out an excellent market for flax grew, so Ernest invested in a flax mill on Ruapuke Island where the plant grew in abundance. Arrangements for the cutting of the



Nichol Bros' Invercargill premises.

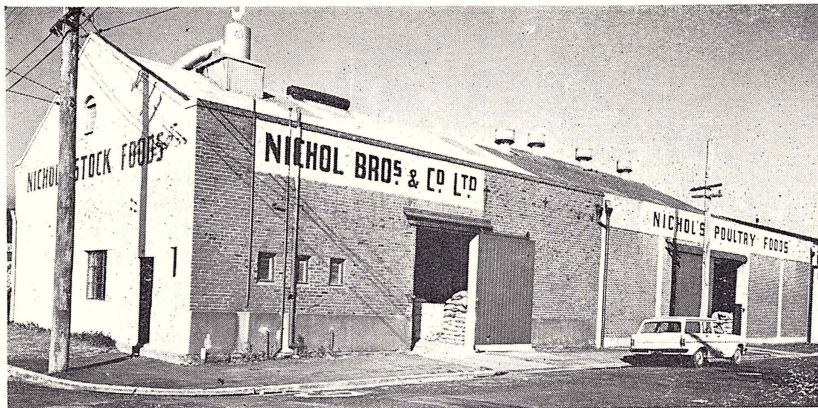
flax were made with the Maori inhabitants of the island, but out of these arose many disagreements and difficulties. When the war ended the market slumped and the mill was closed, leaving Ernest with a substantial supply of flax on his hands.

Early in 1917 the firm had a serious setback when Bluff experienced the worst fire in its history. It began on the premises of a wine and spirits merchant, and soon spread to the other buildings in that block, including Nichol Bros grain stores. The four grain stores destroyed by the fire were replaced by one large, modern one, and new shop premises were also built. These were the most elaborate business premises that had been built in Bluff up to that time.

E. A. Nichol's eldest son was also christened Ernest after his father and commenced his business career as a lad in the Union Steamship Co. for a short period and then with Wright Stephenson & Co. Ltd, where he remained for 18 years, until in 1946 he purchased from his cousins the Invercargill branch of Nichol Bros. He was fairly well known throughout Southland and with the experience he had had in seed production, was in a good position to increase the company's grain and seed business, which he proceeded to do very rapidly.

Within a few months the company was taking an interest in the feeding of livestock and entered the business in a small way by purchasing sufficient plant to manufacture poultry foods. This was pursued with vigour and the plant was added to rapidly. In 1947 the stockfood business of Messrs H. L. Tapley & Co. in Dunedin was purchased and a branch established in Dunedin.

At this time it was felt a decision must be taken as to whether the company would concentrate on medium quality



Nichol Bros' Dunedin premises.

products, which would sell at a cheaper price, or whether they should establish a high standard of quality which would not always be easy to maintain and which would always need to sell at full market price. Fortunately for the future of the company the decision was made to concentrate on quality first in all products and by sticking rigidly to this, the company has reaped its rewards with ever increasing output and a growing reputation for quality products.

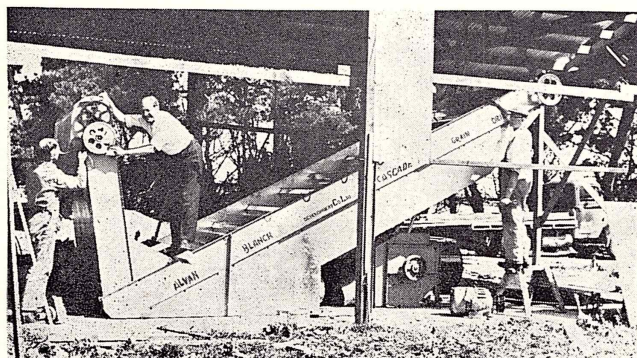
During the past 20 years new premises have been built in Invercargill and these have been added to until their capacity is triple what it was. Much plant has been installed and the company is just completing the building of three modern 100-ton grain silos, and a modern bin fed bulk stockfood plant. New offices were built at Mersey Street and occupied in 1964 and up-to-date brick and concrete extensions to the Dunedin stores have more than doubled their capacity.

In 1960 Ernest Nichol visited Europe, England and America to study methods of stock feeding and in addition to this he brought back with him four Alvan

Blanch grain driers, which were the first such driers to come to New Zealand. It took quite a time for Southland farmers to recognise the value of these machines but now their popularity is established and there are over 60 operating throughout both North Island and South Island districts. This agency has also helped to widen the grain and seed activities.

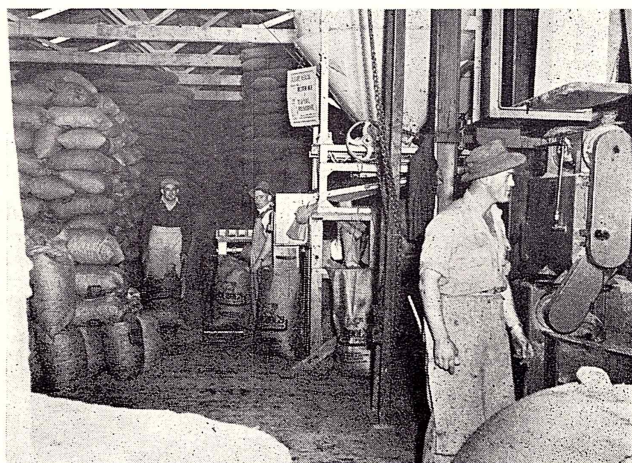
Ernest Nichol made a further trip to United Kingdom and Europe in 1964 and as a result new concentrated stockfoods have been placed on the market in Otago and Southland with growing success.

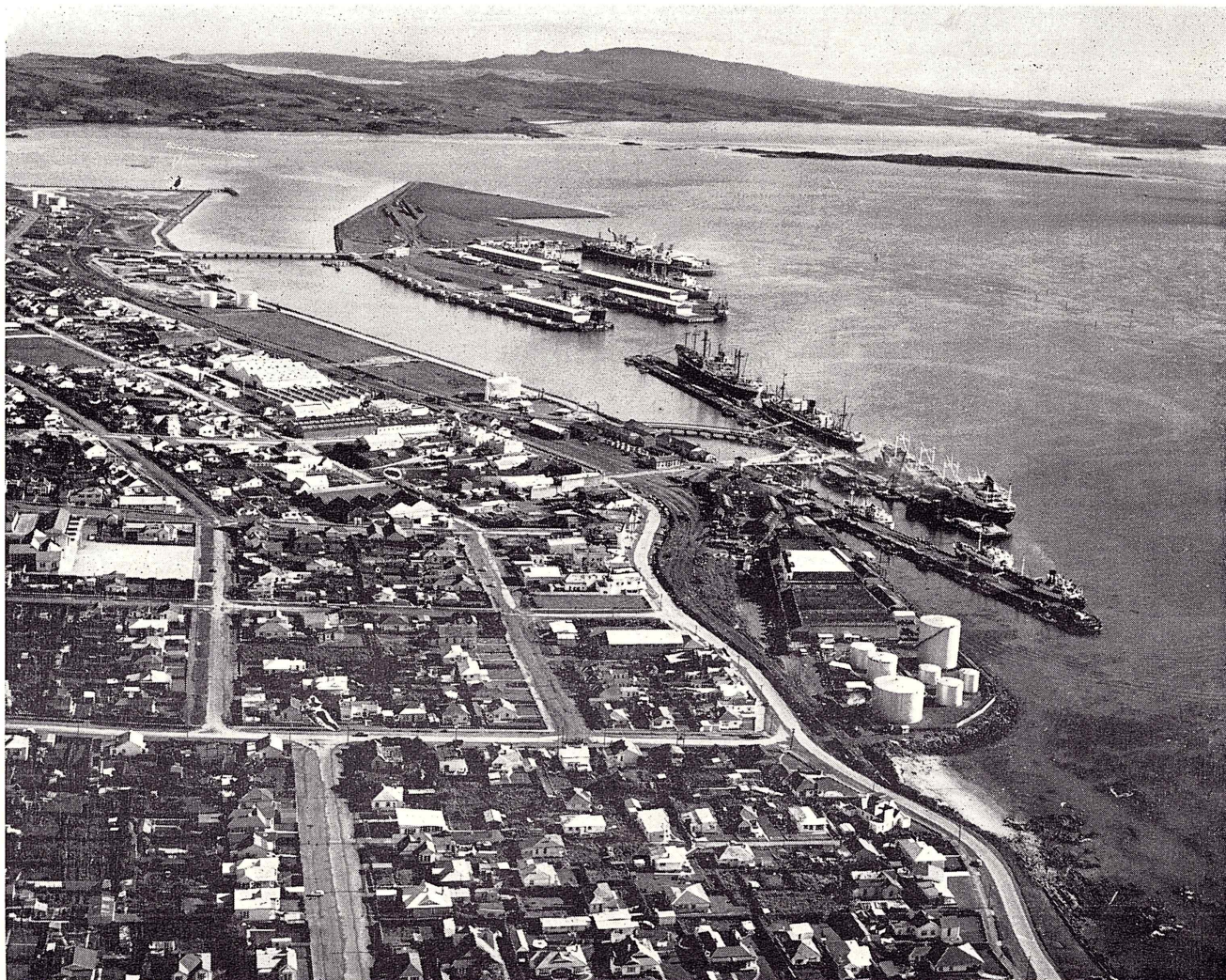
As a follow-up in the history of the family business Ernest Nichol's oldest son, Sam, who graduated Bachelor of Science at Otago University last year, leaves in a few weeks for ten months overseas, concentrating mainly on the formulation and production of animal feed stuffs and it is hoped that with this young mind and a new plant the company will be in a position to keep pace with ever expanding Southland.



Installing the first grain drier at A. & H. Zwies.

Interior view of the Mersey Street premises.





The port and town of Bluff, showing new Island Harbour in background and near record lineup of shipping at wharves.

SOUTHLAND HARBOUR BOARD

P.O. BOX 1, BLUFF

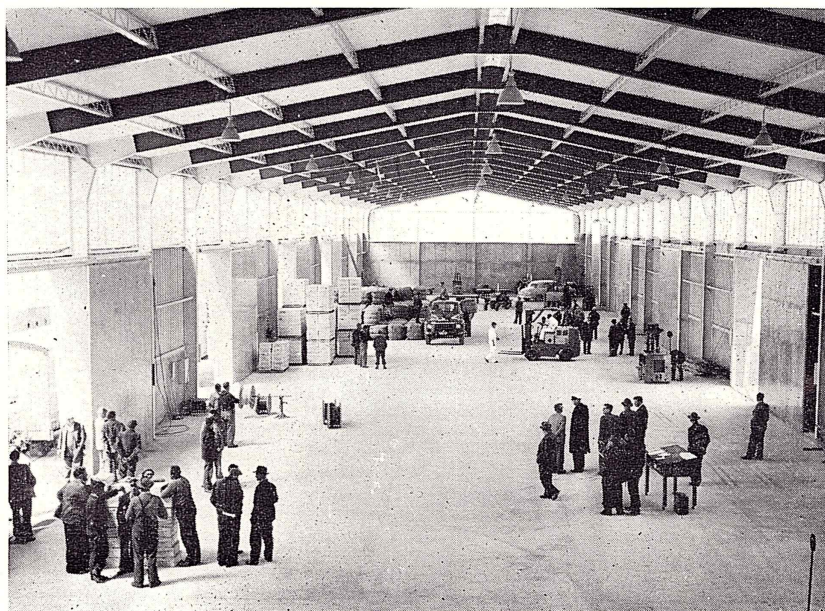
Chairman: J. PHILP, Q.F.S.M.

Secretary: N. D. CULLEN.

Engineer: C. W. LEITCH.

Harbourmaster: CAPTAIN R. BIRD.

RIGHT: Interior of new cargo shed at Island Harbour showing wharf labour preparing to commence operations on a vessel.



PORT OF BLUFF

BLUFF is the port of Southland land and is a fine natural harbour of 14,000 acres protected from westerly winds and kept well scoured by the tidal flow. Two timber wharves served the port for many years until the new Island Harbour of five berths was constructed at a cost of over £5,000,000 and opened for traffic in 1960. From a railway port in the past to a modern shed port served by both road and rail transport has been the result of this major development. Inward cargoes which once had to be hauled to Invercargill for sorting and delivery through the Railway Goods

Sheds there, are now handled speedily by mechanical equipment with a minimum of damage and delivered promptly into merchants stores, eight shillings a ton cheaper than before.

In 1963 a specialised loading berth with five all-weather mechanical package loaders was opened to handle Southland's rapidly expanding frozen meat trade requiring the shipment annually of over five million sheep and lambs as well as other packaged cargo.

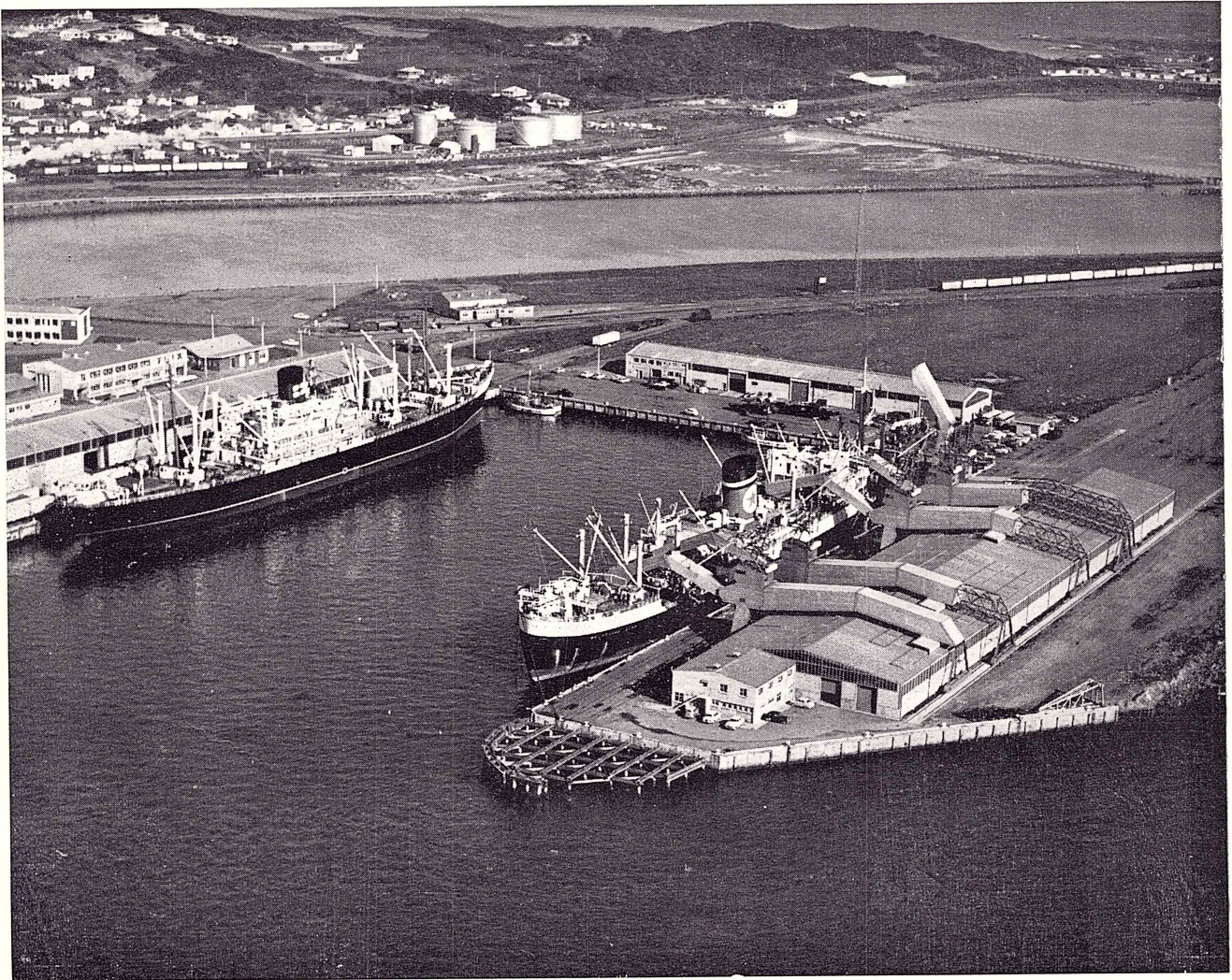
Savings in waterfront wages and berthage dues almost meet the hire charges for the loaders while in one year the savings in turnaround of large refrigerat-

ed vessels have been estimated at 123 ship days valued at least at £1,000 per day.

Investigation into the provision of special berthage to service the aluminium smelter which is proposed to be established at Bluff on completion of the Manapouri Power Project has also been completed.

The trade of the port now exceeds 500,000 tons, the principal exports being frozen meat 86,114 tons and wool 221,048 bales, while included in 322,633 tons of import cargoes last year were 112,671 tons of fertilisers and 118,778 tons of petroleum products.

Bluff is the largest overseas exporting port in New Zealand for mutton and lamb shipped while the value of all overseas exports in 1964 was £38,399,043 or 10.42 per cent of New Zealand's total production.



All-weather package loaders loading frozen meat and cheese into the "Melbourne Star" at the specialised loading berth at Island Harbour, Bluff.

THE SOUTHLAND STEVEDORING CO. LTD.

Stevedores, Wharfingers - Shipping and Commission Agents

BLUFF, New Zealand

P.O. BOX 23, BLUFF

OFFICES: ISLAND HARBOUR, BLUFF

Telephones: Head Office 8109 Bluff, 86-244 Invercargill.

Receiving and Delivering Depot 8082 Bluff

1880

1966

85 YEARS OF PROGRESS IN SOUTHLAND



The above photograph shows the present day staff of the Southland Stevedoring Company, in the background is the new office block and gear shed accommodation now situated on the Island Harbour at Bluff.

Insets show past members of the company who played a prominent part in ensuring the successful growth of the company in its earlier days. Top left: J. A. Hamilton, present manager. Top centre: Mr Walter (Banjo) Calder, died September 1961. Top Right: Mr J. A. Hamilton Snr., died August 1934.

THE art of stevedoring, or stowing of goods in a ship, is by no means a modern trade, indeed it is one that stretches back through the ages to the time when men first sailed their boats on voyages of discovery and trade.

Despite the mechanical equipment the modern stevedore has devised and the vast changes in cargoes and ship design, that has taken place down through the centuries, it is perhaps surprising to realise that the following description was written by a man named Xenophon (430 B.C. - 355 B.C.) of a Phoenician ship he inspected about 400 B.C.

"Now, all the things I have mentioned lay in a space not much bigger than a room that would conveniently hold ten beds, and I remarked that they severally lay in such a way that they did not obstruct one another, and did not require anyone to look for them, and yet they were neither placed at random nor entangled with another, so as to consume the time when they were suddenly wanted for use."

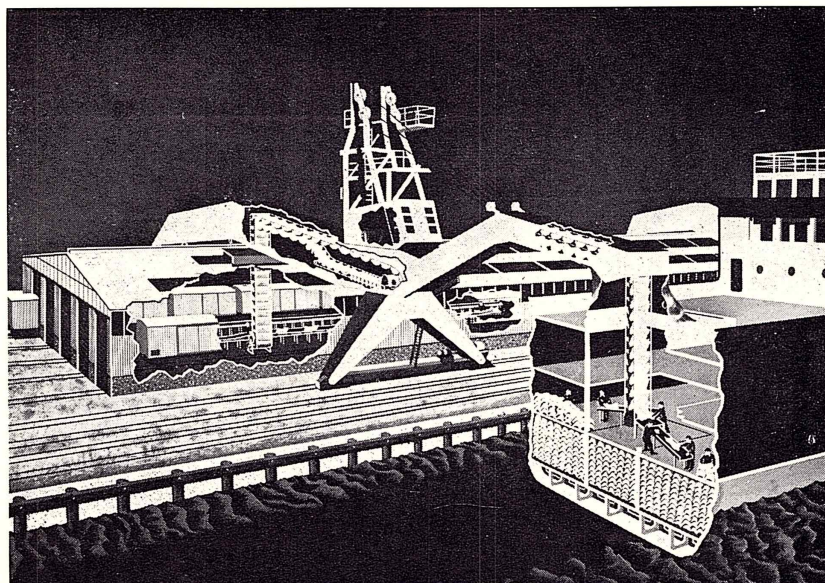
The motto . . . *A place for everything and everything in its place* . . . still applies to stevedoring in 1966 A.D. as it did in 400 B.C.

Just as in 400 B.C. the job of the stevedore today is little altered in its aim of stowing cargo to that of those ancient Phoenician stevedores who stowed the ship that Xenophon saw.

The modern stevedoring company, of course, has a far greater variety of cargoes and ship designs to contend with and up-to-date cargo handling methods are essential. The stevedore has the responsibility for the safe handling of all types of cargoes and the safe and fast loading and discharging of the modern vessels which are the lifeline of our economy.

Today, on our wharves, can be seen the stevedore's tools of trade — mechanical machines of all descriptions, front end loaders, fork lifts, tractors, mobile cranes, mechanical grabs, and motor and rail transporters of all descriptions. How different our waterfront must be compared with what Xenophon saw as he boarded that Phoenician ship so long ago.

The wharves of Southland cater for all types of import and export cargoes. Meat and produce from the rich Southland farmlands make up a large part of the exported cargoes handled by the Southland Stevedoring Company. Ships of all nations use the modern port of Southland and its modern stevedoring



Artist's impression showing one of five all-weather package loaders installed by the Southland Harbour Board in 1963 at a cost of £635,000.

facilities. Many thousands of tons of bulk shipments of phosphate and sulphur are handled for the growing fertiliser industry of Southland.

SOUTHLAND STEVEDORING CO. LTD.

THE Southland Stevedoring Company was formed in 1936. Prior to that, stevedoring for Port Line, Blue Star Line and vessels of other companies was done by G. R. Waddell and Co., a firm of shipping agents and stevedores formed in the 1880s.

Mr J. A. Hamilton, father of the present manager of the Southland Stevedoring Company, was a partner in the firm of G. R. Waddell and Co., and on his death in 1934 his son, J. A. Hamilton, became a partner in his place.

G. R. Waddell and Co. ceased operations in 1936 and its stevedoring interests were taken over by a new company — the Southland Stevedoring Co. — whose shareholders were the Port Line and The Blue Star Line. J. A. Hamilton became manager of the new company.

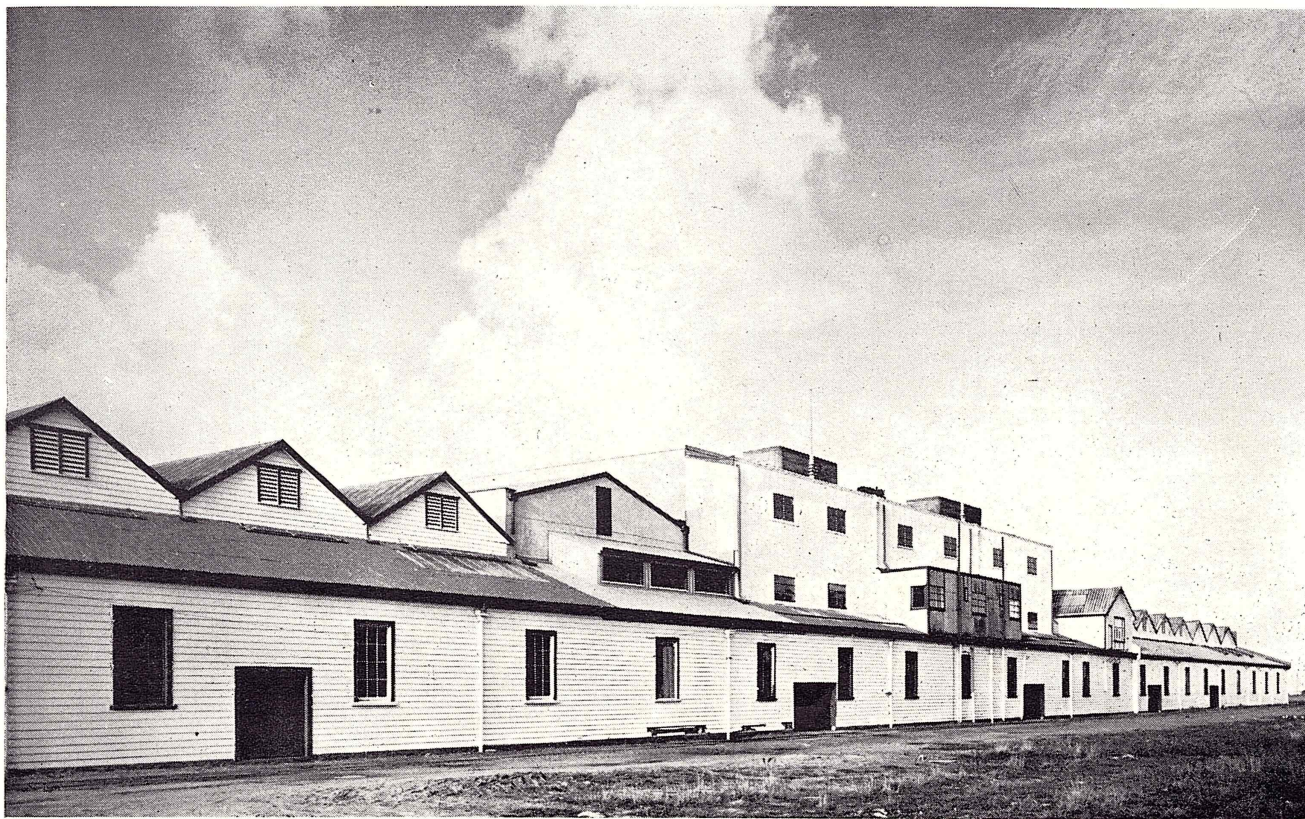
In July 1961 the stevedoring department of Shaw Savill and Albion Co. Ltd branch in Bluff amalgamated with the Southland Stevedoring Company and on November 1, 1964, acting on the joint recommendation of the Producer Boards, Shipping Utilisation Committee and the New Zealand Trade Streamlining Committee, the stevedoring interests of the New Zealand Shipping Company at Bluff amalgamated with The Southland Stevedoring Company. For the same

reason Dominion Wharfingers Ltd, an organisation responsible for the receipt and delivery of all cargo shipped and received at Bluff, amalgamated with the Southland Stevedoring Company.

The late Walter (Banjo) Calder, a well known personality on the Bluff wharves who was respected and liked by all associated with him, worked as a foreman stevedore for both G. R. Waddell and Company and the Southland Stevedoring Company for many years until he retired in 1952.

He was, as were Messrs J. A. Hamilton Sen. and Jun., well known in sporting circles, particularly rowing, at which sport he was considered one of Southland's finest coaches.

The nickname "Banjo" had nothing to do with music. When Walter Calder was a lad he was a paper boy at the time of the Boer War. He carried papers from Bluff to Ocean Beach Freezing Works. Many Australian butchers worked at Ocean Beach during the killing season, coming over from Australia in the Union Company's intercolonial vessels from Melbourne. Banjo Patterson, the famous Australian poet, was war correspondent for Australian papers and when young Walter Calder came to the freezing works the Australian butchers would call out: "Here comes 'Banjo' with the latest news of the Boer War."



Cool stores at Bluff.

SOUTHLAND COOL STORES LTD.

THE original cool stores costing £5082 were erected at Bluff in 1916 by the Bluff Harbour Board in response to a request from dairy farmers in Southland. The stores were extended in 1917 and 1919, with dairy factories contributing to the cost of extensions.

In 1923, representatives of local co-operative dairy companies, after considerable negotiations with the Bluff Harbour Board, agreed to purchase the stores and plant for £10,000.

The Southland Cool Stores Ltd., was incorporated on July 31, 1923, and took possession of the cool stores on October 1, 1923. The shareholders were the Southland cheese and butter factories who took up shares on a fixed basis according to their varying outputs.

Buildings and Plant

Experiments conducted throughout the first year of the company's existence disclosed the fact that cheese, held as it was at ordinary atmospheric temperatures, lost considerably by shrinkage. It was found that the savings to be made by artificial cooling would be more than double the cost of the cooling.

The installation of the necessary plant was proceeded with. Equipment to freeze butter, fish and other commodities was also installed. The cost was about £7000.

A major addition to the stores was made in 1939, when the 3-storey steel reinforced concrete building was erected under great difficulties, owing to the shortage of essential materials.

It was well that despite the outbreak of war, the directors went on with the

extensions, as almost immediately every cubic foot of available space was required owing to the shortage of shipping caused by war emergencies. Furthermore, the cost of the new building, approximately £40,000, was not more than half the amount that would have been required on the cessation of hostilities. New machinery was also installed and the system of refrigeration brought up-to-date.

To meet the ever-expanding demand for storage space, alterations, improvements and additions to buildings and to plant, have been continuous during the lifetime of the company. Recently part of the old wooden store has been replaced with a two-storied concrete structure costing about £52,000 for building and refrigeration plant required. Additional rooms have also been insulated to provide for zero storage.

Replacement cost of buildings today is estimated at £350,000.

The Stores which are situated on the foreshore at Bluff on land belonging to the Southland Harbour Board cover an area of about one and-a-half acres compared with the original store building which was a single storey building about 100 feet by 60 feet.

Capacity of Stores

The present capacity of the cool stores is 706,186 cubic feet.

With the gradual decline in dairy produce meat storage has been accepted in available space and provision made for more zero storage space. At the present time the stores can store up at least 150,000 carcasses of lamb at any one time, as well as other frozen produce in addition to cheese and butter.

Produce Stored:

The produce under cool storage includes cheese, butter, lamb and mutton, fish, crayfish, venison, hares, egg pulp, fruit.

All cheese and whey butter exported from Southland is stored by the Southland Cool Stores. Substantial quantities of creamery butter for local consumption in Invercargill and Southland have to be drawn from other butter producing areas in New Zealand and this butter is also stored in the cool stores at Bluff.

Dairy Produce Stored

The total quantity of dairy produce stored in the Cool Stores during the past 43 years amounts to approximately 391,000 tons cheese and 34,250 tons butter.

**Highest quantity cheese exported
13,818 tons 1933/34 season.**

Lowest quantity cheese exported

4041 tons 1963/64 season.

Dairy production in Southland reached the peak in 1933/34 season, declined gradually until 1960 and has been reasonably stable since then. The maximum number of dairy company shareholders was 67 in 1930. At the present time there are 14 cheese factories and one butter factory in Southland.

The value of all produce stored amounts to approximately £2,500,000 per annum.

Directors:

The number of directors who have guided and controlled the company during the 43 years of its existence has been surprisingly few. There have only been 29.

First there were the 7 stalwarts who did the arduous preliminary work, Messrs A. H. Mackrell, J. Dunlop, J. Fisher, R. McBride, J. Smith, J. S. Grieve and T. R. Eades. To these men fell the heavy responsibility of organising industry support, negotiations with the Harbour Board, railways authorities, department of agriculture, structural engineers and cooling and refrigeration experts.

The company has always been fortunate in its choice of directors. The ablest men in the industry have served in that capacity. They have devoted themselves wholeheartedly to the job and the re-

sult today is that shareholders own what is considered by Southland dairy farmers to be the finest assets in the country belonging to the dairy industry, and that free of debt and encumbrance.

Chairmen:

The company has only had five Chairmen:

Mr A. H. Mackrell, 5 years;
Mr J. Dunlop, 19 years;
Mr W. Young, 6 years;
Mr T. McKenzie, 1 year;
Mr J. M. Archibald, 12 years.

Present Directors:

Messrs J. M. Archibald (Chairman), R. J. Irwin, G. D. McKenzie, D. McNaughton, A. McPherson, N. A. Nuttall and R. S. Tait.

Staff:

The company has been well served over the years by an efficient staff under the competent leadership of store managers, Messrs W. T. Walker, A. Mathieson, A. Bremer and G. Y. Congreve present Store Manager, and chief engineers Messrs A. McKillop, E. Sheldrake, H. Walker and W. Dunlop, present chief engineer. The company has 17 employees at the present time.

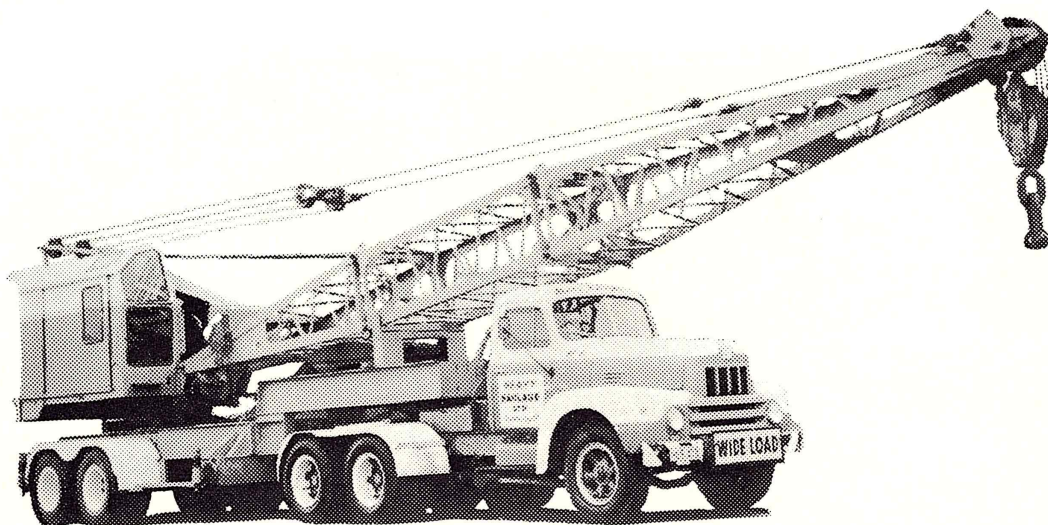
Secretaries:

The company's first secretary was Mr W. A. Saunders followed by Messrs W. D. Palmer, J. L. Orr and G. F. Merriman, present secretary.



Back row: From left, Messrs A. McPherson, G. Y. Congreve (Store Manager), W. Dunlop (Chief Engineer), G. D. McKenzie, R. J. Irwin, D. McNaughton.

Front row: From left, Messrs R. S. Tait, J. M. Archibald (Chairman), G. F. Merriman (Secretary), N. A. Nuttall.



HEAVY HAULAGE LTD.

Transport, Agricultural and Earthmoving Contractors

RELIABLE and efficient service in handling and transporting all types of heavy equipment in Southland and throughout the South Island has built up a high reputation for Heavy Haulage Ltd, an Invercargill-based firm, during the 18 years that the firm has been operating.

Following the recent acquisition of a 20-ton crane Heavy Haulage Ltd have been able to increase their operating efficiency by combining the use of the crane with their transporters and thus eliminating any delays in loading heavy lifts which are not self-propelled.

Heavy Haulage are recognised as experts in transporting boats and have been associated with practically all boats transported in the Southland area over the last three years. These include the Queenstown hydrofoil, Meteor; the Waiomana, one of the tugboats being used on Lake Manapouri; the Endeavour and Resolution passenger launches being used on the Manapouri scheme; Toiler, the latest addition to the Bluff oyster fleet and many steel and wooden fishing boats.

A notable "first" achieved by Heavy Haulage Ltd was the transporting in April 1966 of two 18-ton Plymouth Diesel locomotives for use in the Deep Cove tailrace tunnel from Invercargill to Deep Cove.

These were the first loads ever transported from Invercargill over the Wilmot Pass road into Deep Cove.

INVERCARGILL

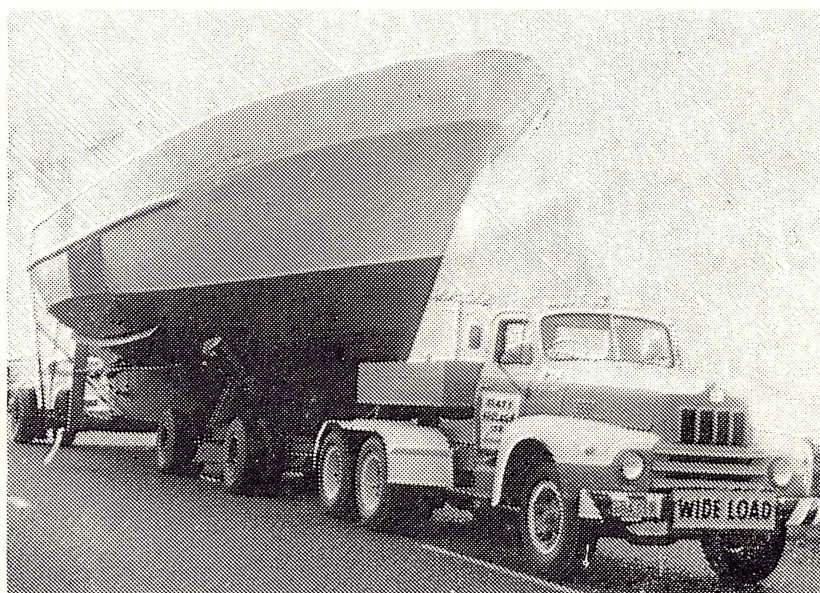
Phone 88-711

4838

P.O. Box 77 INVERCARGILL

BLUFF

Phone 8661



The transporters were driven to Supply Bay, Manapouri, where they were driven on to barges and towed 20 miles up Lake Manapouri to West Arm. On arrival at West Arm they were driven off and then proceeded over the 14-mile Wilmot Pass road to Deep Cove where

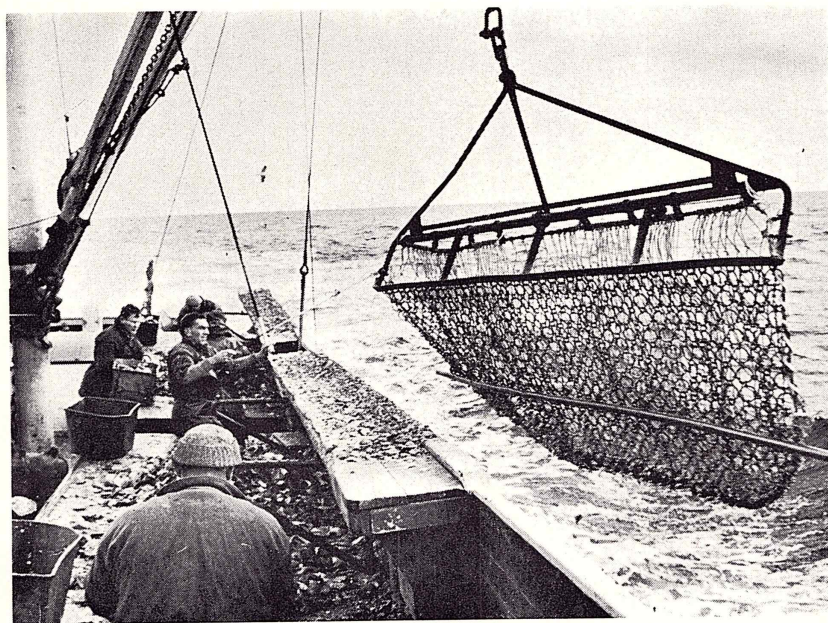
they were unloaded.

Heavy Haulage with their wide range of specialised equipment have proved over the years that they are capable of providing rugged, round-the-clock service for all types of heavy equipment handling and transporting.

GOLD FROM THE SEA

THE OYSTER FISHING INDUSTRY IN FOVEAUX STRAIT

OYSTERING IS A BIG BUSINESS, WORTH AROUND \$523,000 IN 1964, AND \$664,000 IN 1965. THERE MAY BE 20 OR MORE BOATS DREDGING IN THE NEXT SEASON WITH A QUOTA OF 17,000 SACKS AS THE OBJECTIVE.



Oysters from Foveaux Strait are enjoyed all over New Zealand as well as overseas.

Lowering the net.

—Hazelidine Photo

ROYALTY and millionaires delight in them, expatriate New Zealanders crave for them, in any language they are a luxury — and Southlanders have them on their back doorstep — Foveaux Strait oysters.

There is the “gold” that barely was noticed by the sealers and whalers who first put the strait on the map. There, over about 110 square miles between New Zealand’s South Island and Stewart Island, lie natural commercial oyster beds without peer.

The rich sea floor swept by the Southland current flowing east from sub-tropical waters is harvested seven and a half months of the year by men who follow their fathers and fathers’ fathers.

Also from the Port of Bluff go other small craft, by the score, into the equally taxing and challenging waters around the Fiordland coast, among the world’s most dangerous, where rewards can again be big with the crayfish.

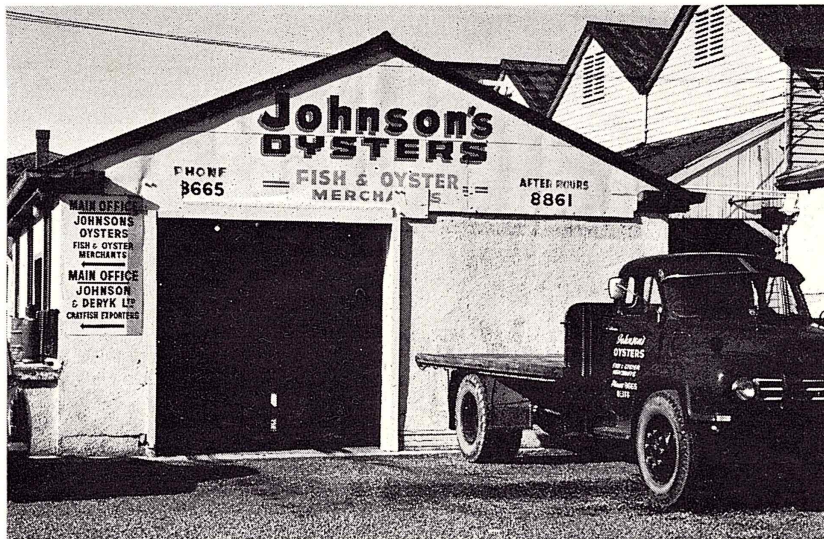
But the crays are a fairly new addition to the harvest from the southern seas in contrast to the oysters that men have been dredging from the floor of the strait for more than 100 years.

There in the sun and swell or bitter cold the fleet trawls with monotonous regularity, about every quarter-hour the mechanical winches swinging the loads from dredges on to the boatside culching benches where skilled fingers in rubber stalls sort oysters from five finger starfish, pink barnacles, hermit crabs, slipper shell, cushion starfish, sponges, sea urchins, biscuit starfish, scallops, dog cockles and more.

Beginnings have been all but lost. Stewart Island’s Oyster Cove, a lovely little tidal estuary sheltered from the westerlies, was perhaps the first spot to yield the renowned succulent bivalve. There in the 1860s, or before, cutters were grounded as the tide ebbed to expose oysters all around and which then were shovelled into the holds, cutters often being filled within three tides. Even in those days one cargo would fetch \$700.

But little Oyster Cove was exploited almost without remorse and in a very few years was hardly more than a memory. There are still some oysters there, and a few where they were transplanted on the island’s Heron River, but days of quick hauls and big money are gone.

Attention turned to Foveaux Strait where less readily accessible oyster beds had been known of for some time.



Johnson's premises.

THE perfect trio — oysters, quality, service" is the slogan associated with the Bluff firm of Johnson's Oysters. The founder of this family concern was Mr W. E. Johnson who has been a fisherman all his life and today still plays an active part in both the administrative and practical affairs of the firm, assisted by other members of the Johnson family.

Mr Johnson started up in business with one boat, the "Black Cat," which was the first diesel powered boat in the fleet. Today the firm operates 4 boats in the 19-strong Bluff fleet and the factory is supplied with oysters by a fifth boat.

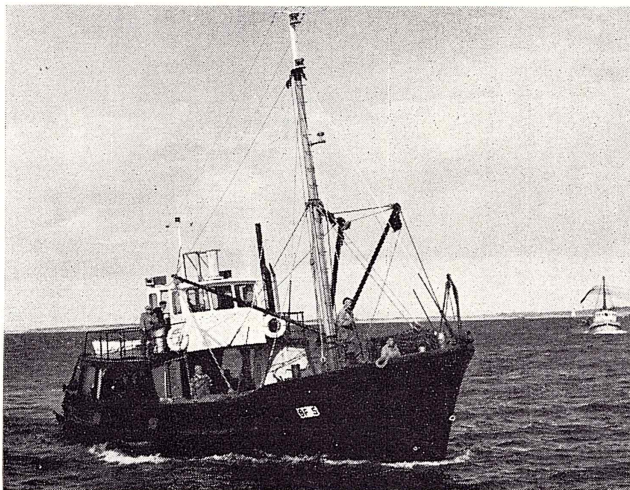
In the early days the oysters were sold in the sack, but now nearly all the oysters are opened and canned in the modern Bluff factory. This method is much cleaner and the oysters can now be sent promptly to any part of New Zealand.

The original premises were established in 1932 in a small shed in Gore St, Bluff, and later moved to a factory in Slaney Street. Today there is a modern opening and packing factory covering one quarter acre. The staff, which originally numbered six, now totals 85, 30 of which are employed in the opening of the oysters.

Oysters — — Quality — — Service

The Perfect Trio

JOHNSON'S OYSTERS P.O. Box 37, Bluff Phone 8665



One of the fleet of oyster boats operated by Johnson's.



Packing oysters in the modern Bluff factory.

Despite the Oyster Cove example, Foveaux Strait was dredged for all it was worth and, happily, it was worth much more than any one guessed.

By 1891-92 more than 374,000 dozen oysters from the strait were being sent to Australia, besides the much greater number finding ready New Zealand outlets. And the southern oystermen had comparative freedom to develop while their northern counterparts were made subject to 1892 legislation requiring licensing and export duty. While some beds in the north were closed to allow rejuvenation, Foveaux Strait beds were used to the limit of resources.

Today the beds stand alone and their yield still is rich and likely to remain so. A 1900-06 survey that traced 12 beds pronounced the supply of oysters inexhaustible, which is not the view subscribed to now, but high catches are being assured with conservation.

Yield Increases

In 1923, 28,785 sacks were taken. Five years later the catch was up to 38,793 sacks and by 1934 had risen to 52,254 sacks. Further boats began to join the small fleet and in 1939 11 craft dredged 75,145 sacks. Increases continued — to 94,459 sacks in 1946 and 97,336 sacks in 1947 after conservation moves.

A concentrated study leading to scientific management of the oyster beds came in 1960 and has meant further increases. There may be 20 or more boats dredging in the next season with a quota of 170,000 sacks as the objective. Boats are limited in the number of sacks allowed from defined areas.

Says the Minister of Marine, Mr Scott: The oyster situation is much better than before delicensing of the fishing industry in 1961.

Management of Beds

Management of the beds has been given a boost by improvements in the catch and catch-per-hour figures following sharp falls in 1962 and 1963 when apparently there was a high natural oyster mortality caused by an upsurge in the prevalence of a parasite and a shortage of suitable oyster food in the water.

Why that should have been so is unknown as yet. Thankfully, the Strait generally is rich in food material because of the nutrients and minerals in the flow from the Southern Ocean and the minerals and organic material in the flow of rivers and streams into the Strait from the mainland and Stewart

Island. Every hour each of millions of the oysters on the sea floor filters about two and a half gallons of water through its feeding and breathing apparatus.

Among the main reasons for the location of the extensive oyster beds are the rivers discharging into the Strait and the tides and the currents. The rivers pass over large areas of limestone before discharging into the Strait and it is believed they enrich the sea water with calcium salts which in turn go into the formation of oyster shell. The strong tidal streams in the Strait are thought to have considerable influence, not only in carrying nutrients, but in helping to spread spawn.

Grows Fast

The spawn of the Foveaux Strait oyster, which is thought by biologists to be similar if not identical to a South American species, is only a fraction of a millimetre in size, comes in millions and grows fast. November is believed to be the peak spawning time, though sea water temperature rises in January and February are also thought to be connected with the spawning cycle. Young oysters are released or ejected from the adult oyster and attach to suitable objects, often dead shell or other live oysters where they remain for a time then break free — to await the dredges or be covered by material washed along by currents or fall prey to the five-finger starfish and other sea floor dangers.

The Predators

It is not an easy life for the sedentary animal. The five-fingers, main known predator, insert tentacles between gaping oyster shells and gradually force their way in or break off and just as surely bring death to the oyster. Even grimmer is the starfish which puts sucking tube feet on each half of an oyster shell and applies steady pressure until the oyster is fatigued, gapes and is ingested by the starfish. Then there are shellfish that have abrasive tongues to bore small holes in the oyster shells. In some parts are small, red marine worms that eat out tunnels in the shell and finally form a tunnel-network destroying the oyster's refuge.

The Oysters' Friends

Yet the oyster does have its benefactors, unwitting though they are. In one part of the beds the benefactor is the tough, leathery kaeo, about a foot long

and clinging firmly to clumps of rock and shell. It can reduce considerably the efficiency of dredges. Elsewhere are nesting mussels matted by large clumps of branching coral-like material and sponges, all tending to fill the dredges and cause over-riding of the dredge bit.

And so oysters grow, reaching takeable size in 18 months to two years. Thus an oyster spawned in 1966 has a good chance by 1968 of being on a five-star-plus menu or salted and wrapped in last week's newspaper.

In all, about 300 square miles are estimated to have oyster-bearing ground, the commercial area being a sixth of that in 10 to 27 fathoms; and not every inch of the estimated commercial area of 50 square miles gives a good return from dredging. It is calculated officially that there are about five oysters to the square yard in the commercial area — and the commercial area is spread over 110 square miles.

Prospects Bright

For people who just like their oysters on the plate, may it be sufficient to know that although the season's take be in the order of 100 million oysters, there are still a billion or more growing near where the others came from.

Those taken can go by fast, overnight road transport from Bluff to Christchurch, and airfreighting by the National Airways Corporation has chilled cans on sale in the far north within 24 hours of the fleet berthing at Bluff.

Prospects are becoming still brighter. A recent Ministerial statement drew attention to preliminary research for the Marine Department by Massey University's food technology department, which has studied packaging materials and anti-oxidant substances to extend the storage life of frozen oysters.

Freeze Dried Oysters and Crayfish

Oysters and crayfish have even been freeze-dried in Southland. There is no doubt that the Foveaux Strait oyster will be on, and pass, many more lips than ever before. The Fishing Industry Board in fact is arranging to feature oysters in nation-wide advertising when the 1967 season opens.

Oystering is big business, worth around \$523,000 in 1964 and \$664,000 in 1965. Add to that the crayfish yield, which is still greater, and Southland can be pleased indeed with the "gold" that once was unrecognised.

"FOVEAUX"

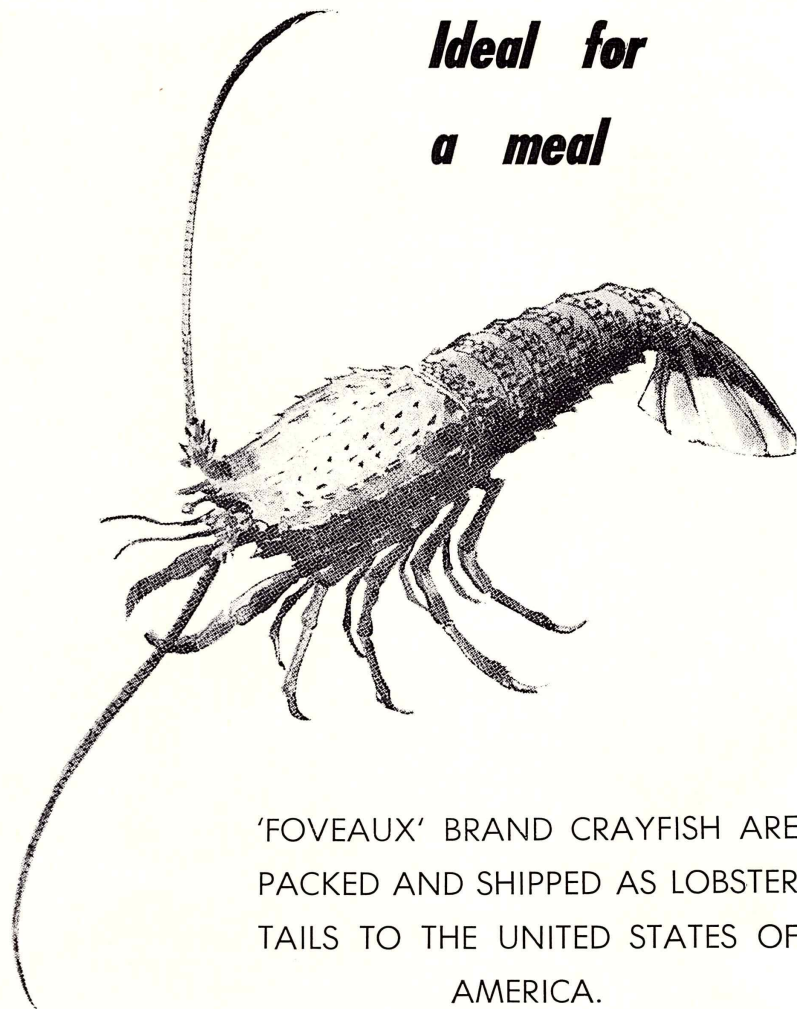
Brand

QUALITY

CRAYFISH

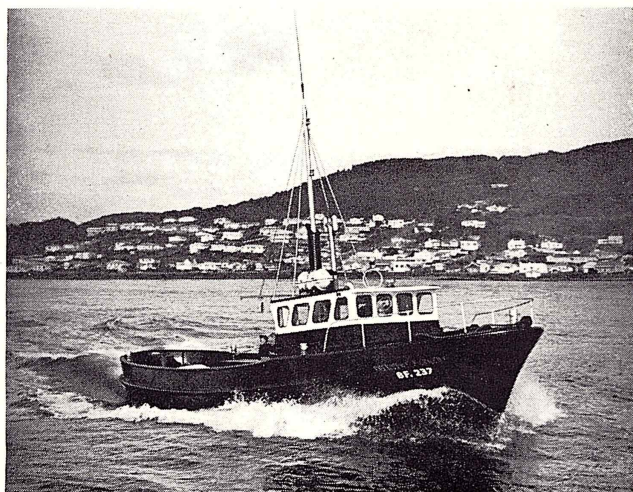
A FAIRLY recently established firm is that of Johnson & De Ryk Ltd which is engaged in the packing and exporting of crayfish under the "Foveaux" brand. These are packed and shipped as lobster tails to the United States of America. The products carry the slogan "Ideal for a Meal."

The firm, which was established in 1960, has a large, up-to-date factory where the catch of 75 per cent of the private fishing vessels in the area are prepared for export. They are cleaned, weighed and sorted into size, packaged and then frozen to await shipment to the States.



***Ideal for
a meal***

'FOVEAUX' BRAND CRAYFISH ARE
PACKED AND SHIPPED AS LOBSTER
TAILS TO THE UNITED STATES OF
AMERICA.



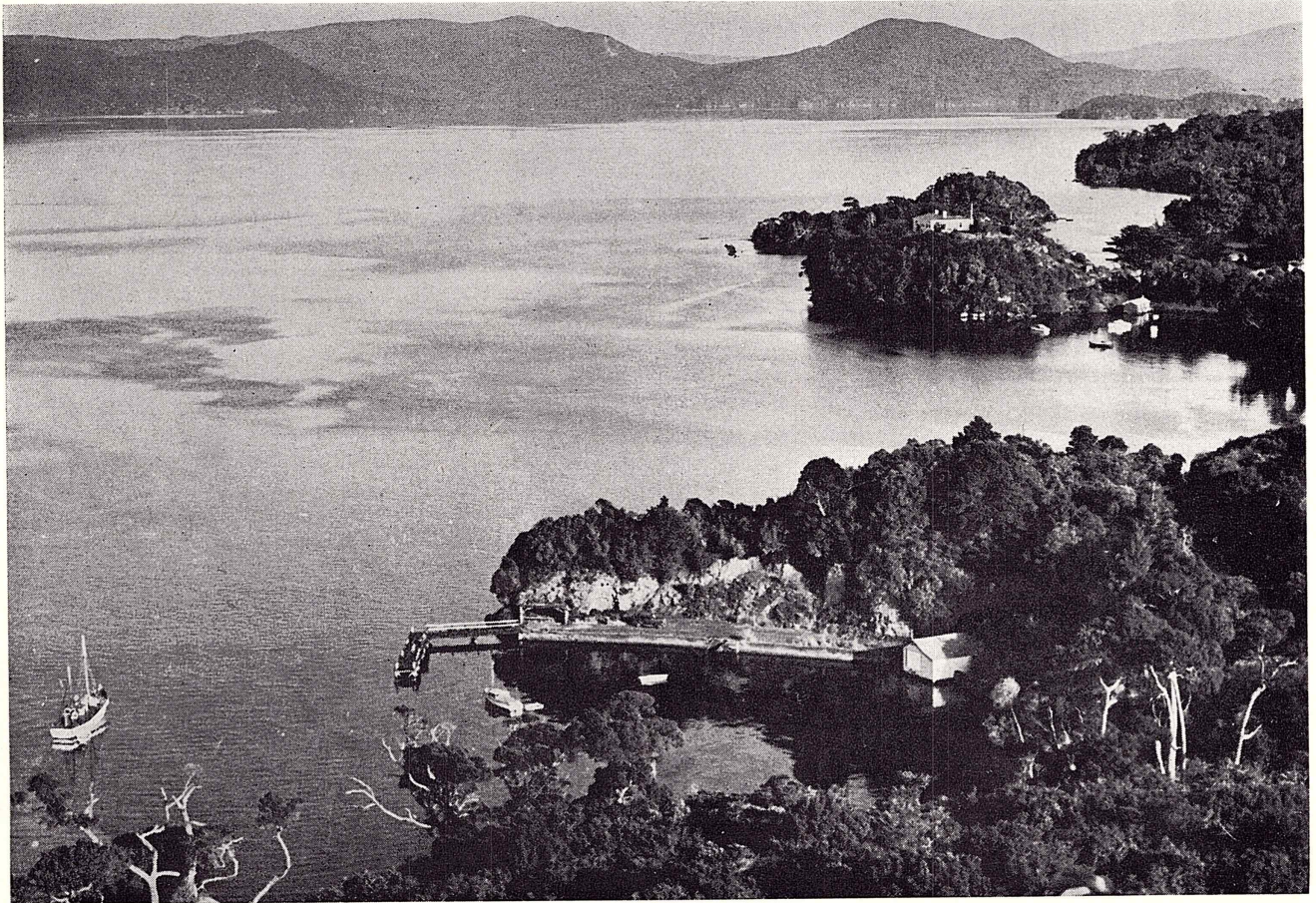
Crayfish boat setting out to bring in the harvest.

**JOHNSON
AND
DE RYK LTD.
BLUFF**

BOX 37

PHONE 8573

STEWART ISLAND — Peaceful Haven



ABOVE: Looking across Golden Bay along Patersons Inlet, Stewart Island.

—Hazeldine Photo



LEFT: Stewart Island walks are famous all over the world. This one is known as Lonneker's Walk.

—Hazeldine Photo

Come and see Southland for yourselves

Message from the County Chairman Mr W. Baird



Mr W. Baird, chairman, Southland County Council.

I COMMEND this booklet "Southland Expands" for the information it contains.

I have been connected with Local Bodies in Southland over a considerable number of years and have experienced the tremendous upsurge in primary pro-

duction that has taken place in this province, particularly during the last 15 years.

Southland is a very pleasant place to live in, with its excellent farming land, good roads, and wonderful scenic attractions that are, I believe, unsurpassed anywhere.

Visitors to the area are always most welcome, the people of Southland taking pride in carrying on the traditional hospitality established by the pioneers.

I trust those who read this booklet will receive something of value from it but I also extend to all an invitation "to come and see Southland for yourselves."

SOUTHLAND COUNTY COUNCIL

P.O. Box 903, Invercargill.

Chairman: W. Baird.

County Clerk: A. J. Drage.

County Engineer: D. F. Davis.

Area: 3702 square miles.

Population: 27,740.

Rateable Values:

Capital £79,793,370; Unimproved £21,257,510.

System of Rating: Unimproved value.

General Rates: 1965/66 year varies from 3d to 4½d. Total struck £303,265.

Special Rates and Levies:

Southland Harbour Board .205d on Capital Value, £67,159; Southland Catchment Board .249d on Unimproved Value, £21,735; Invercargill United Fire District Rate .041d on value improvements £1810. Various sanitary charges in townships.

County Towns and Rates:

Lumsden County Town constituted 1/4/65 (was previously Lumsden Town District).

Capital Value: £338,845.

Unimproved Value: £19,975.

General Rate 2s 1d on Unimproved Value.

Sanitary Charges £563.

INDUSTRY ENCOURAGED

There are two major towns within the county — namely the Invercargill City and Gore Borough. Naturally most of the industry is centred within the boundaries of these municipalities. A major build-up of industry in the county is not particularly encouraged but, at the same time, the council is always willing to do what it can to encourage industry to the south. It will give its

help and assistance to any organisation which seeks to establish itself in the county, particularly those industries which require large areas of land for the establishment of their industries. There are many areas in the county that would be suitable in reasonable close proximity to both Gore and Invercargill and which would be handy to rail access.

SOUTHLAND COUNTY

Facts and Figures

Climate

Southland enjoys a relatively low annual rainfall, being in the vicinity of 40 inches per year, and this is normally spread throughout the whole year. It is unusual for Southland to experience any real major flooding and, on the other hand, drought conditions are practically unknown.

Labour Availability

Labour is, for the most part, inclined to be in short supply and this is brought about largely by the fact that the province is devoted practically entirely to primary production. With ever increasing production taking place and also considerable land subdivision, what surplus labour there is can readily be absorbed on increased production. Nevertheless, the Invercargill City, boroughs and townships all show a considerable annual growth and, undoubtedly, the labour pool, over the years, has shown considerable increase and will further increase as further secondary industry becomes established in the area.

Land Types

With an area of some 3700 square miles, it is only natural that the land types throughout the county vary very considerably. It is primarily a wool and fat lamb production area but, of recent years, beef production is on the increase. In addition, particularly in the drier portions of the county, there has been considerable production of cereals, such as wheat and oats, and also small seeds, such as grasses, turnips, etc.

ROADING AND TRANSPORT

Southland is well served with adequate and good roading facilities and, for many years past, the sealed surfaces have been extended by some 50 miles per year. At the present time, including State Highways, the county has 747 miles of sealed roads and 1865 miles of metalled or gravelled roads. It is one of the few counties in New Zealand where the majority of its roads have been classified as Class I, which permits the opera-

tion of heavy motor vehicles with axle weights of up to 8 tons.

Branch railway lines have gradually been done away with over the years and a first-class system of transport facilities for the transport of stock and produce has come into being. Passenger transport has also been well catered for, practically all of the townships being served by either private or NZR buses.

POTENTIAL FOR PRIMARY AND SECONDARY INDUSTRIES

Southland County's 3700 square miles are all capable of production. It is first and foremost a primary production area and is still capable, by means of improved farming methods and land subdivision, of greatly increasing its farming output. The county's present capital value is approximately £80,000,000, but new values being released shortly will probably see this figure increased to at least £120,000,000.

It has adequate main railway lines; it has a first-class roading network; it has a modern up-to-date port at Bluff, including excellent loading facilities and storage, which should give every encour-

agement to this additional development taking place. Stock killing facilities are also adequate. There are two freezing works near Invercargill, another at Bluff and a fourth one at Maitua. In addition the South Island Freezing Works Investigation Committee has recently recommended that a fifth works be established in the Gore area.

As far as secondary industry is concerned, the availability of flat land at all the townships, its good harbour, adequate supplies of electrical energy, its good roads and transport facilities, must, in the long run, encourage secondary industry to the province.

THE ANDERSON TRUST

IN 1942 a well-known Southlander, the late Sir Robert Anderson, gifted his 600-acre property at Dipton to the Crown, and special legislation was enacted to establish the Anderson Trust Fund. The objects of this trust are to provide financial assistance to ex-servicemen purchasing farms, and to assist widows and orphans of ex-servicemen.

Initially the gifted property was farmed and developed by the Department but in 1945 was subdivided into two units which were balloted and selected on freehold tenure by two ex-servicemen. The net annual farming profits and the proceeds from the sale of the property were paid into a Trust Account, thus establishing a cash fund from which grants could be made.

The bulk of this capital, which is not required for immediate payment, is invested in Government stocks, realisable

at call, and the interest from these investments now forms the Trust's only income.

Grants made by the board were originally limited to £10 but this figure was increased to £25 by amending regulations in 1952. The total amount of the grants paid annually has varied considerably from £55 (1948-49) to £715 (1954-55) and down to £250 in 1964-65.

The majority of children requiring such assistance are now over the qualifying age of 16 and because of this, calls on the fund are diminishing, although widows are, of course, still eligible.

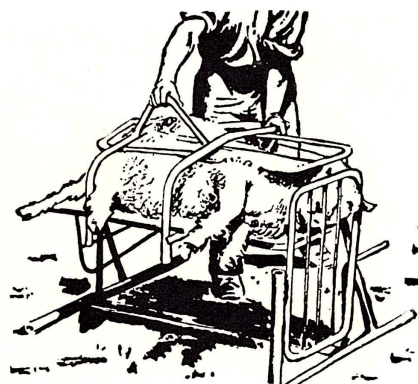
Sir Robert Anderson's generous action in establishing the Anderson Trust Fund has resulted in the provision of greatly appreciated assistance to ex-servicemen and their widows and children in straightened circumstances.

G. N. BEGG ENGINEERING CO. LTD.

MANUFACTURERS AND DISTRIBUTORS

R.D.8 Invercargill

Phone Drummond 749



The Begg Sheep Handler, designed and patented by the G. N. Begg Engineering Co. Ltd, has a ready market throughout New Zealand and is now being made under licence in the U.K.

DRIVING through the small township of Drummond one would hardly suspect that it contained a well-established rural farm equipment industry.

Yet it is the site of the G. N. Begg Engineering Company Ltd, manufacturers of the highly successful sheep handler, the Begg loader and the Begg ditch cleaner.

The manager, Mr George N. Begg, has no regrets about establishing a firm so far from the labour source. "We manufacture solely for the farming industry, and it is natural that we should establish ourselves in the centre of that community," he says.

The firm was established in a 20 by 20 concrete garage in 1957, at first doing only repair work for the farmers of the district. Then Mr Begg conceived the idea of a handler for sheep, a problem that had often bothered his farmer father.

The Begg sheep handler which provided an efficient means of footrotting, crutching, mouthing, drenching, and dagging sheep, rapidly caught on in New Zealand and is now being made under licence in the United Kingdom. For the farmer, it eliminates the struggle he had formerly with an unsecured animal and also gave him the advantage of dealing with the sheep even when wet.

More than 5000 of the handlers, now patented, have sold in New Zealand, and in the United Kingdom sales are increasing also.

Several years ago the firm branched out into the making of ditch cleaners, a machine which now has an excellent market. The ditch cleaner is ruggedly

constructed to suit farm conditions and can be fitted to all wheel and crawler tractors. It has a 4ft 6in. wide blade, giving a versatile range of uses.

The firm then moved into the field of front-end loaders, another essential piece of farm equipment. Their model, because of its versatility, rapidly caught on and is manufactured in Auckland under licence by Spencer Allen Products Ltd.

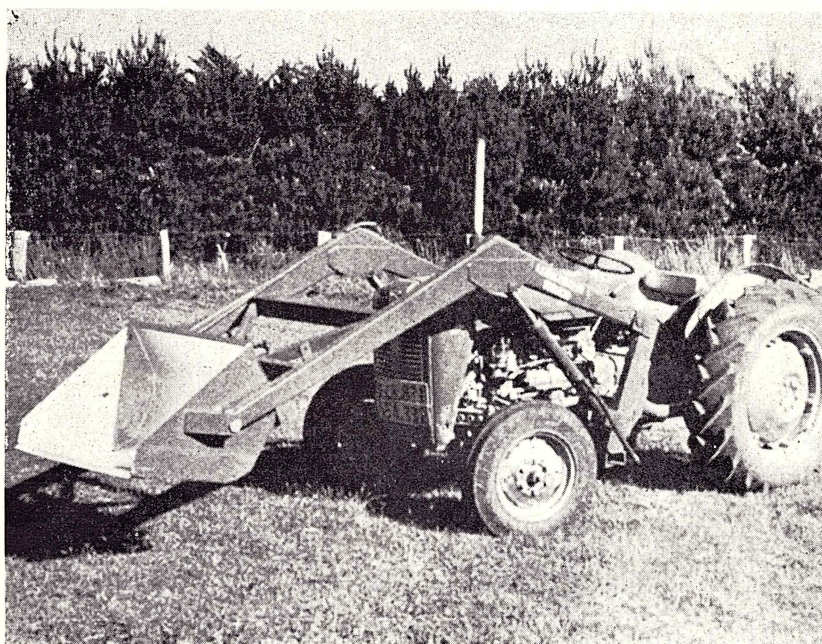
More than 800 of the loaders are in use throughout the Dominion, their popularity being due to the fact that they

are tailor-made to fit any well-known make of truck.

They can be detached in only a matter of minutes by the removal of four pins.

Most of the work on its products is undertaken by the Drummond factory, but where specialised machinery is required the work is let to sub-contractors.

G. N. Begg Engineering Co. Ltd is a thriving company. Each year since it began operations, its turnover has increased by 30 per cent, an increase due to its well made products.



The front-end loader manufactured by the company.

INDUSTRY

Facilities Offered:

Power • Water • Public
Services • Local
Authorities • Government
Departments • Population
Printing.

CONSTRUCTION

Homes • Commercial
Buildings • Furniture &
Fittings • Joinery
Appliances • Plumbing &
Drainage • Aggregates
Builders' Supplies
Engineering • Concrete
Products.

PRIMARY PRODUCE

Food Production
Fertiliser • Stock Foods
Wool Production • Meat
Production • Dairy
Products.

TRANSPORT

Motor Vehicle & Servicing
Railways • Airways
Shipping • Harbour
Facilities.

A WAY OF LIFE

Cultural Facilities • Sport
Opportunity • Education
Accommodation • Health
Real Estate • Holidays.

WINTON

EXPANDS



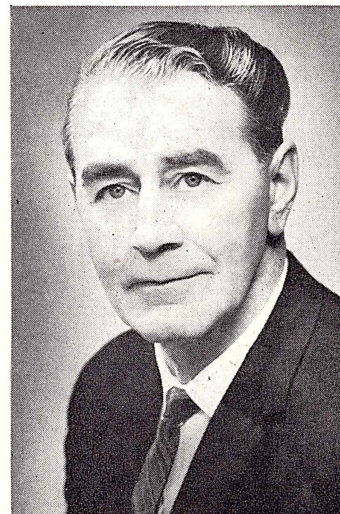
Winton — an old world town, but the cars are modern.

—Hazelidine Photo

Dawn of a New Era of Progress and Development

By K. F. J. COCKER

Mayor of Winton



Mr K. F. J. Cocker, Mayor of Winton.

NEW ZEALAND has come a long way during the last 50 years, its progress being most noticeable since the early 30s, those dark years of depression which should never have been allowed to occur. But from all evil it seems comes some good, and if it did nothing else of benefit to mankind it at least brought about a fresh turn of mind by our "policy makers." This exercise of mind, with its departure from previous concepts of right from wrong, in turn was causative of the dawning of a new era in the country's progress and development.

Prosperity Brings Problems

Today we can look back over the 3 decades in retrospect and behold an almost unbelievable upsurge in our growth with its consequent lifting of all living standards which stems from the ever increasing prosperity of our country. But prosperity in its turn besets the nation with problems, albeit very interesting and challenging problems. And, leaving aside the ever present built in weakness of a world pattern of international trading, we have reached a stage in our growth and economic development where new markets have to be found for our exportable commodities if we are to maintain our present standards, let alone expanding still further. This, then, calls for further thinking and fresh evaluations.

Diversification Needed

As a food producing country New Zealand stands supreme and clearly we can leave to those responsible in this

field to continue to improve on an already good record, and provide still further our great main source of income. But what of our subsidiary activities, industry, manufacturing and of course, our growing tourist trade. These are the avenues on which we must rely to an ever increasing extent to supplement our primary production, and to save valuable overseas funds. Too, if we are to maintain an even balance in our own little world of employment, the expansion of our industrial and manufacturing projects must be at least complementary to our dramatic increase of population as evident over recent years.

Good, Honest Publicity

It is necessary, therefore, through good and honest publicity, to have our potential visitors fully acquainted with all New Zealand has to offer. When this is accomplished to its fullest extent we may rest assured that our visitors from overseas will grow yearly in their thousands, because we have much to offer in unique attractions. For the rest, it is for us to welcome them in a manner befitting to visitors, so they may tell others that our hospitality with all that this word implies, is of a matching quality to our scenic beauty.

Industry, if it is to expand must also be encouraged, but too, it must be assisted. If financial assistance is indicated, this should be forthcoming and to both encourage and assist an industry to settle in any particular area it should have the benefit of all information relative to the successful undertaking the locality has to offer.

Show Facts Only

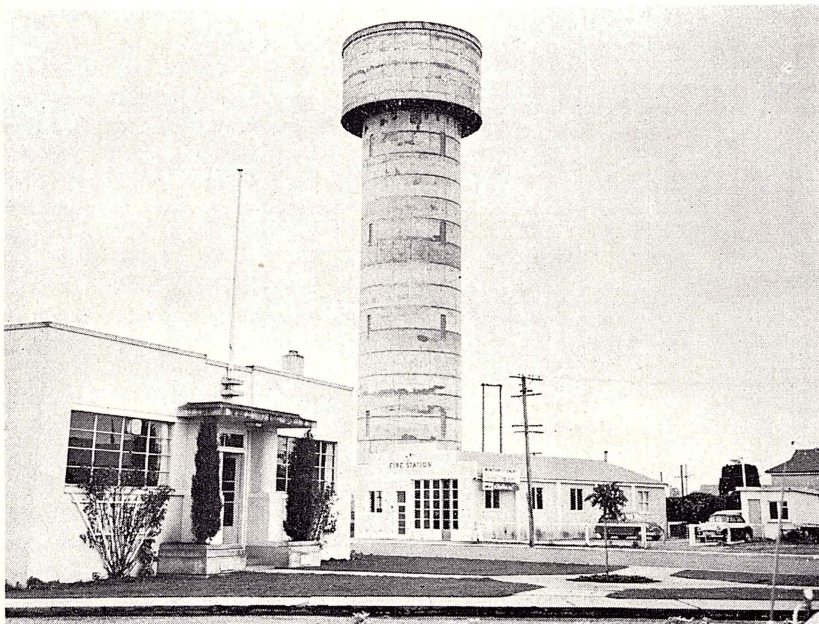
I do not go along with any form of pressure on industry to settle in any particular area, but each town, village or city is entitled, as in the case of tourist trade, to show to prospective industry what it has to offer. From there on, industry should be expected to make its own assessments, and act accordingly.

For the reasons outlined, I am happy to associate Winton with your current Expand series. To my mind a publication of this nature assumes a national importance through the information service to which it aspires. A factual presentation of material information relative to the country as a whole or in part cannot be other than of the greatest assistance to both tourist and industrial potential, and deserves the commendation and support of all who have the welfare of New Zealand at heart.

Borough's Importance

The town and district of Winton, though but a small link in a chain of settlement, has in its favour and to its credit an importance to the national economy far beyond its size. It is an area, I feel such, which offers a rewarding future for industry of a nature suitable to its requirements and potential. Especially to any industrial undertaking to which initial establishment costs are of vital importance.

Winton Borough is the centre for a very rich farming district and is situated 20 miles inland from Invercargill on State Highway No. 6 which is the main road to Queenstown, Milford Sound, Lakes Te Anau and Manapouri.



Winton Municipal offices, Fire Station and Water Tower.

—Hazelidine Photo

Rate of Growth

The Borough has a high pressure water supply and a fully treated sewage disposal system. A co-educational high school was opened recently at a cost of £182,000 and there are two primary schools, one being a State school and the other a Catholic one. A recent population estimate has shown that the rate of growth in Winton is the highest in Southland.

Cliamte

A weather recording station has been operating since November, 1965, but it is too soon to give any comparative data as yet. However, annual rainfall is in the 31-33 inches bracket, hours of sunshine about 1800 and mean temperatures are said to be only 2 degrees lower than Christchurch for midwinter and midsummer conditions.

Virtually all sports are catered for with good fishing rivers within a few miles of the township. There is an 18-hole golf course less than one mile away.

District Potential

The district would appear to have great potential for both primary and secondary industries as it is one of the most productive and progressive farming district in New Zealand. Wheat crops up to 120 bushels per acre have been recorded while 6-8 sheep can be carried per acre. The Borough owns approximately 11 acres of industrial land which is available on 21 year leases with right

of renewal, rental is reviewed every seven years and there is a right to freehold at the end of the first seven year period.

Land For Industry

available for industry. It is anticipated that labour would be readily available for industry as, at present, a fair percentage of residents must go outside the district for work.

Roading and Transport

Roading and transport facilities are excellent with rail facilities adjacent to all the industrial area. The modern Port of Southland at Bluff is only 37 miles away. Work has already commenced on a new sawmill which will be the most up to date in New Zealand.

Land For Housing

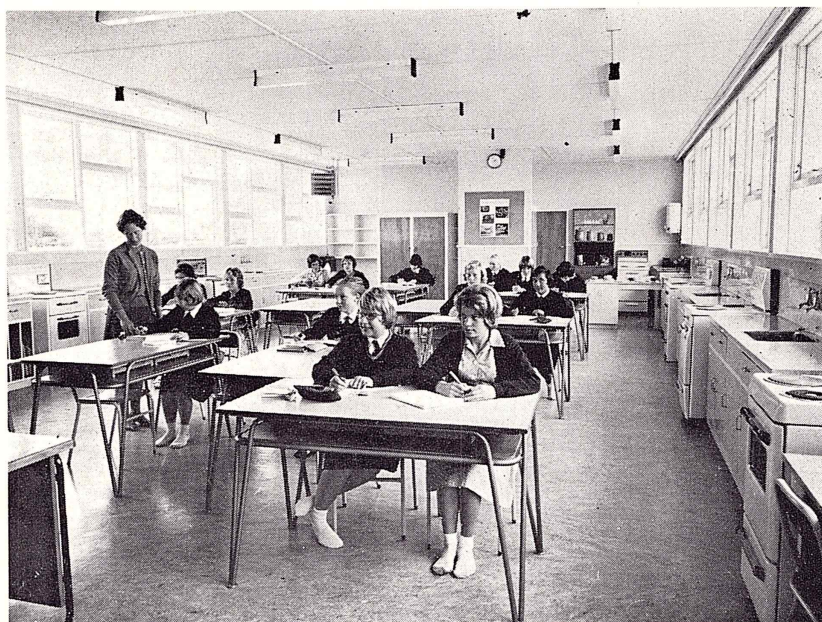
Land for housing is readily available at reasonable prices, i.e. £400 to £750 and all new subdivisions have underground power and telephone services. Housing costs are from approximately £3 per square foot upwards. Industrial land is also freely available and recent sales have been at about £500 per acre. Industrial buildings can be erected from as little as £1 per square foot depending on the type of building construction.

Insurance companies and the Southland Building Society regard Winton as a very sound area and the equal of Invercargill for loan purposes.

Social Services

There are two doctors, a Plunket nurse, a district health nurse, two dental nurses and a dentist as well as a maternity hospital. An efficient and modern voluntary Fire Brigade serves the district while the Invercargill Brigade is available if required.

Winton is a pleasant place to live in and undoubtedly has a bright future.



Central Southland College's Home Science Wing.

—Hazelidine Photo

HEENAN ENGINEERING CO. LTD.

SOUTH HILLEND

WINTON

Phone 755

WHERE there's skill and enough drive it will find an outlet no matter how remote the base might appear. That seems to be the story behind the Southland firm of Heenan Engineering Co. Ltd of South Hillend, near Winton.

Built originally to service the needs of farmers in Central Southland within a small area at that, the skills shown by Bob Heenan and his staff have en-

abled the firm to sell an ingenious locally-invented farm gadget in all parts of New Zealand and even in Australia. In the highly-competitive sheep-handling market this takes some doing but at the comparatively remote part of the country Heenans demonstrate that skills are found everywhere. Of course the sheep handler isn't the only thing the firm manufactures.

For years Heenans — Bob took over

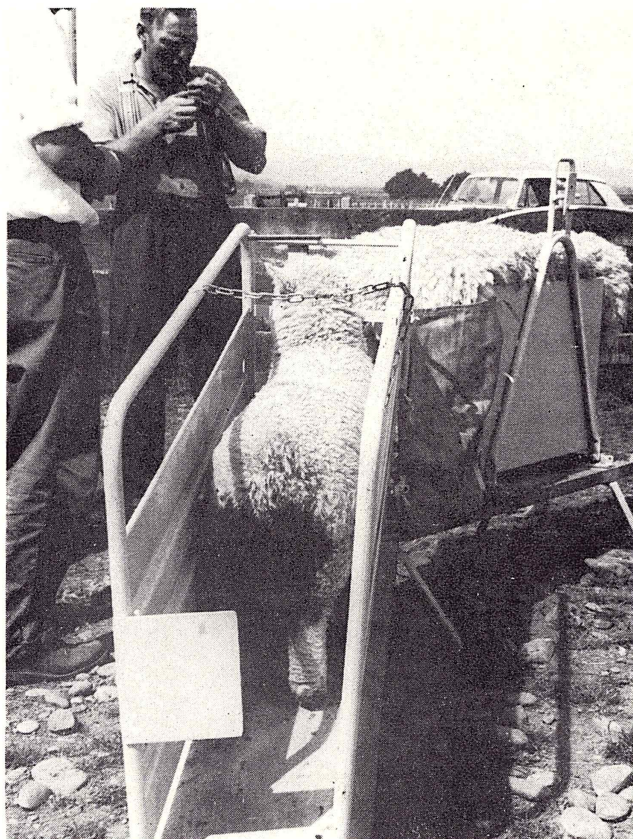
from his father Alf three years ago — have been meeting the needs of the farmers in a fashion that has brought out all the versatility of craftsmen. Anything that could be made has been made. Hay barns to specification, portable sheep loading ramps, sheep yards and races, down to gates have been the usual run-of-mill demands. The attached garage and service station built right on the junction of the historic Hundred Line (from which all land in Southland is measured) and the busy main highway from the coalfields to the city, is another part of the business that caters for the needs of the farmer.

The emphasis here is on skill. Often in the height of a busy harvest there's no time for the exact spare and Heenans have manufactured 'improvisations' that have kept headers going at a vital time — and for years after!

Most recent move in the firm has been the production of the sheep-handler patented as "Crutch Easy." It was invented by a neighbouring farmer, Ned McLeod, who had that bane of all farmers — a sore back. Ned thought out a way to handle sheep to avoid much of the stooping and man-handling of sheep. He took his mocked-up contraption to Bob Heenan who suggested "the

LEFT: The latest Heenan-built device, the "Crutch Easy," showing the detail of the handler in which sheep are held in holder (right), enabling the operator to carry out a great variety of tasks on the sheep having both arms free. Foreground section holds a sheep which cannot back out, ensuring a steady supply of sheep. Inventor Ned McLeod lights up to the left during a demonstration.

BELOW: Photo shows manufacturer Bob Heenan adjusting the holding pen on the handler to cater for the bigger stud sheep used in the demonstration. Curved rod at top holds sheep firmly in a variety of positions without crushing or bruising sheep.



odd improvement." A few were built, a patent was granted, sales soared and Bob saw that the only way to go was along production line methods. Heartening sales of the all metal, portable, adjustable and highly versatile "crutch easy" were capped off early in 1966 with at least one sale in South Australia and several inquiries from as far away as Western Australia. Sales in the North Island have been good. Recently the handler was demonstrated to thousands of farmers at a large field display in the Waikato.

Having seen the "crutch easy" at work one is inclined to think that it's the most undernamed device on the market. It can do anything easier, quite apart from crutching. Or at least it frees the operator to do dagging, eye-wigging, mouthing, inoculating and drenching, foot rotting and so on. It's a case of you name it. The device will free your two arms to do it.

The sturdy device is made partly with a special press Bob imported from Australia to do the job. This press is being used in a way that is probably unique in the country. It has allowed Heenans to branch out into this and another new field in more efficient style. The new field is the building to specification of steel panel sheep yards. These seem to provide some of the advantages of lightness, strength and adaptability farmers look for in sheep yarding.

Manufacturing for farmers is a recognisable field of endeavour for a young man like Bob Heenan. But when he beats them at their own game then that's a different kettle of fish. He did this in the art of ploughing. In fact he was so good that he won the New Zealand ploughing championships in 1957 at Lincoln, Canterbury and so won the right to represent New Zealand at the World championships for ploughing at Peebles, Ohio, U.S.A. Then Bob was 21 and the youngest to represent his country at this sport — or whatever it is! For that matter he still holds the record for the youngest winner of the award as national champion in the past 10 years at least.

Typically his father made the plough using many pieces from discarded ploughs. Some were found in a nearby river bed. This fact hit the headlines at the time in farm papers all over the world.

It could well be that yet another Heenan Engineering Company product, the "crutch easy" will find its way into the farming pages, and operations, outside this country.

WINTON BOROUGH COUNCIL

Box 25 Winton.

Mayor: Mr K. F. J. Cocker.

Town Clerk: H. R. Hunt.

Borough Engineer: Moir, New & Jenkins (consultants),
Invercargill.

Area: 560 acres.

Population: 1750.

Rateable Values:

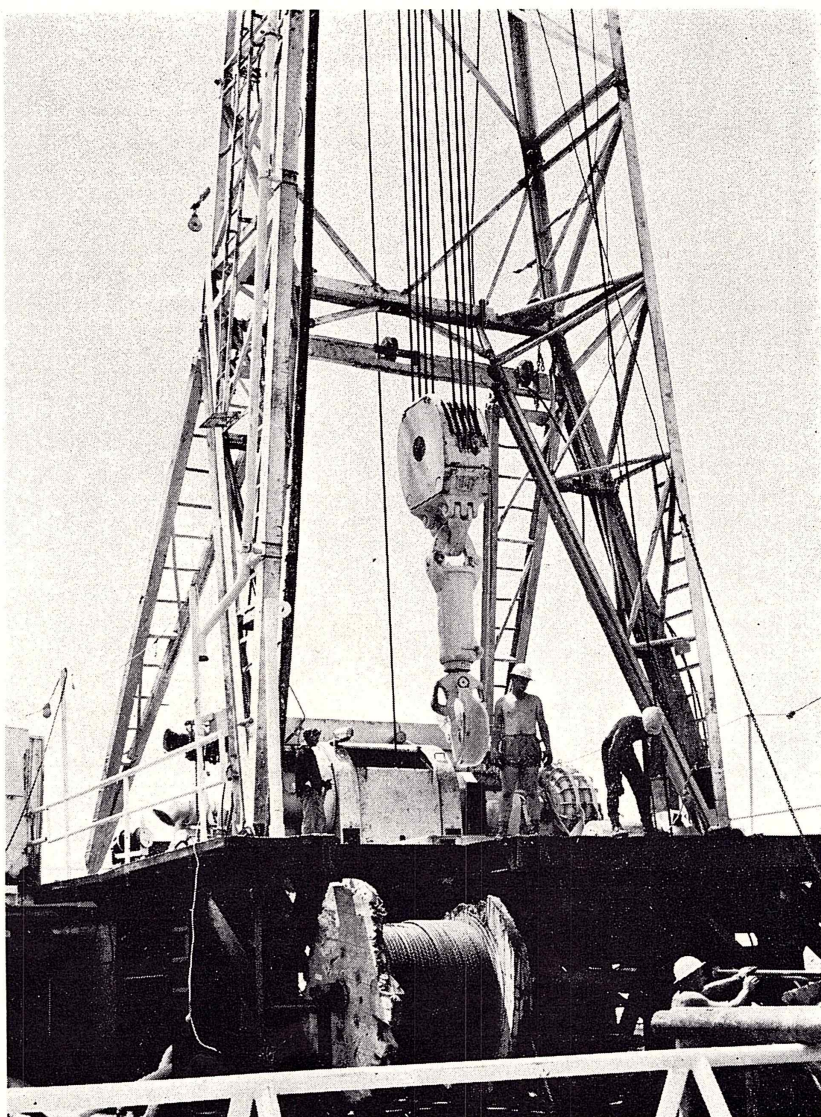
Capital £1,979,960; Unimproved £458,165.

System of Rating: Unimproved Value.

General Rates: £12,172.

Special Rates and Levies: £13,879.

IS OIL THERE TOO?



Oil drilling near Winton.



The well-stocked yards and up-to-date equipment of the Winton Timber Company, an offshoot of D. M. Marshall and Co. The large building houses woodworking machinery and stocks of finished timber.

D. M. MARSHALL & SONS LTD.

SAWMILLERS AND TIMBER MERCHANTS

WINTON

SITUATED right at the crossroads of Southland, the rapidly expanding firm of D. M. Marshall and Company, Winton, is setting a trend for timber production in Southland with the introduction of the latest in Japanese sawmilling equipment.

When the new mill is ready and the development plans completed the whole site will cover 30 acres with a new mill of 19,000 square feet as the central core.

It will complete a long-term development plan which has seen the establishment of a timber company adjacent to the original mill still in use and a "Boliden" treatment plant which today caters for an increasingly large section of the public.

This up-to-date plant at present in operation and the new equipment due to be installed represents quite a contrast to the mill taken over by the present owner, Mr Dave Marshall, in

1936. Previously his father John, who had come to New Zealand from Australia in 1906 and had worked around Southland, had set up a mill on the outskirts of Winton. When the present company was formed the daily output of 1500ft was low by today's standards. Ten years later when Dave took over finally, the output was 2000ft. But today this has soared to 10,000ft and will reach double this figure when the new mill is operational.

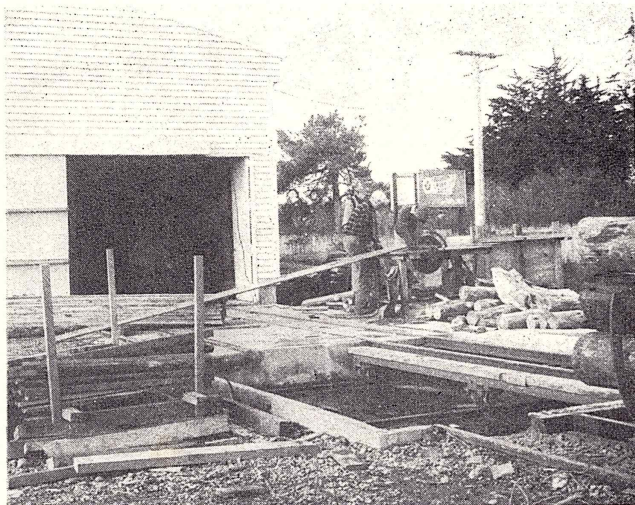
In 1936 the staff numbered eight men. Today 34 are employed, including eight in the bush near Winton. This total will increase as the recently-launched move to cart logs from Tuatapere gathers speed. At present these logs, some of them up to 60ft in length, are being taken from Tuatapere to the old mill at Winton, a journey of over 60 miles.

This move to cart logs from Tuatapere is to service the central and eastern parts of Southland and will result

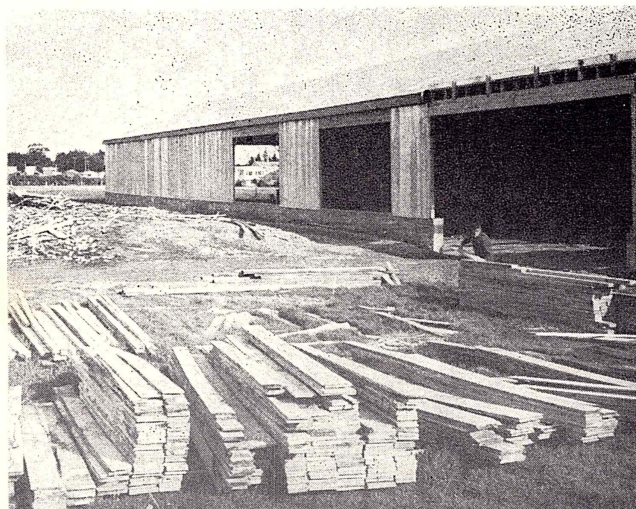
in a larger labour force moving into Winton. When the new mill is completed it will be equipped with Japanese bandsaws and automated equipment that will handle logs up to 5ft in diameter and producing lengths of up to 30ft. The company will concentrate on the production of longer lengths of timber, in addition to the shorter lengths, in order to meet a market that is growing. This will be an unusual feature.

Fuji Seiskusho equipment — the latest there is — was chosen by Mr Marshall after a trip to Japan. It includes fine bandsaws that are most efficient in operation, two band head-rigs and two fully automated carriages. One of the carriages will be remote controlled and won't require a man to be on the machine at any stage. The two head-rigs are 60in. and 45in.

The use of this fine steel and bandsaws is seen by Mr Marshall as a great step forward compared with the old



Dave Marshall (grey hair, shirt, in foreground) adjusts equipment outside the recently installed Boliden multi-salt wood treatment plant which has grown rapidly in popularity with the districts' farmers for the quality of its treated fence posts.



Part of the new 19,000 sq. ft sawmill which will be the most up-to-date in the South Island at least. Some of the Japanese equipment will be automated. In the rear is the Boliden treatment plant, timber yards, and through the door is the present mill. When the new mill is completed the whole space occupied will be 30 acres.

circular saw. Another great improvement is the Winton-built 65ft steel spar for skyline hauling of logs. This is the first of its type and was designed by Mr Marshall in collaboration with the Winton firm of Doherty Brothers.

This skyline hauling rig has been in use for nearly two years and has attracted visitors from many parts of the country. At present it is working in the famed Hokonui hills ten miles east of Winton where large stands of native timber remain.

Formerly much of the cutting was carried out closer in to Winton but operations have had to be extended.

Marshalls will also cut farmers' plantation or woodlots in a radius of up to 60 miles. At present about half the timber being cut is native — rimu,

matai, totara, miro, kahikitea — with the rest being pinus radiata and macrocarpa.

Stocks of Malayan and Australian hardwood are also held in the timber yard.

Much of the Malayan hardwood is made up on the site into gates for which the Winton Timber Company has become famous. Up-to-date woodworking machinery provides finished timber here.

To meet what has been described as "a terrific demand" the company installed a "Boliden" timber treatment unit. This caters principally for the wants of farmers in the vicinity. In the first year, 750,000ft of timber — mostly fence posts — were treated with the "Boliden" process. Mr Marshall can foresee a great expansion in this field of treating

timber in the years to come.

D. M. Marshall and Company can lay claim to one important first in that they dock their timber at both ends. This is thought to be the first firm in New Zealand to adopt this tidy practice. It was also one of the first to install a blocking machine used for cutting up slabs (or offcuts) at a sawmill in the South Island.

There to service the public with the provision of high grade timber the firm of D. M. Marshall and Co. is well placed in view of its progressive policy of using the most up-to-date equipment. The central location ensures that the vast majority of Southland is tapped with plentiful supplies of timber reserves and easy access to markets for Marshall products.



Modern trucks are needed to keep up with the hungry mill at Winton.



Stockpiles of native timber logs in the foreground contrast with the orderly stacks of cut timber and posts near the Boliden treatment plant.

STATED so often that it has become almost a cliché is the expression that the wealth of Southland has been built on two agricultural skills — drainage and liming—developed to a high degree in the province after initial pioneering. In fact, those two basic things are still regarded as the prime requisites for land development in most parts.

The tiny village of Browns is built around those two industries. Both the Browns Limeworks and Mr A. D. Campbell's field pipe works are thriving affairs fitted with some of the latest equipment.

With an output of nearly two million field tiles a year Peter Campbell's works play a major role in the productivity of the province. Pipes from this well known works have been sent over 250 miles north to Timaru although the bulk are used in the province.

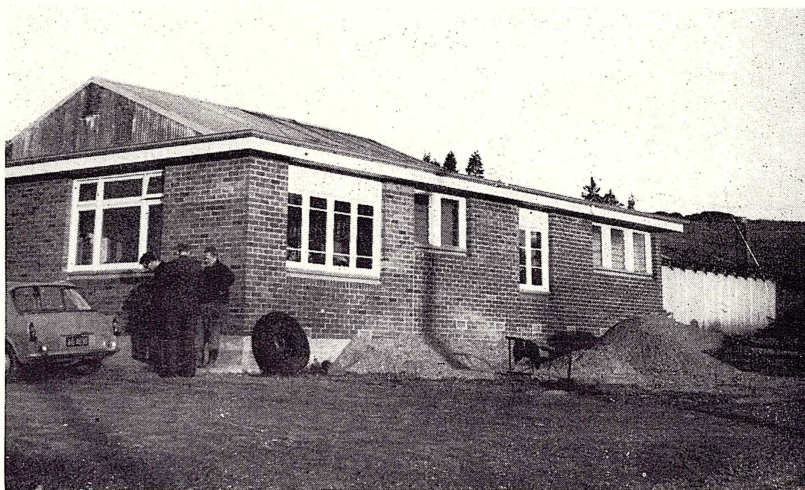
Recent installations of up-to-date equipment, including the most modern tunnel kiln in New Zealand, have increased the productivity per man in a way that would have been hard to have foreseen in 1938 when Mr Campbell took over the works. But the beginnings of the industry go back to 1887.

In July that year a brickmaker, Sampson Buxton of Makarewa (eight miles north of Invercargill) took up the land which fronts the main Gore-Winton Highway (now State Highway 96). There was suitable clay on the site to make tiles and bricks. Many of the buildings in Central Southland were built of Browns-made bricks. The tall 65ft. chimney gave the little village a distinctive landmark for years. Sampson Buxton sold the property to a Mr Brown who in turn sold it to a Mr Frisby in 1920. Mr Campbell acquired the property from Donald Anderson.

Covering an area of five acres the whole site reflects the growth in prosperity of the agricultural scene with the recent extensions designed to eliminate the tough manual labour traditionally associated with the industry. Most of the original quarry has been worked out but suitable clay deposits were found at Hokonui only five miles away. Land nearby the original works has been bought and is in use.

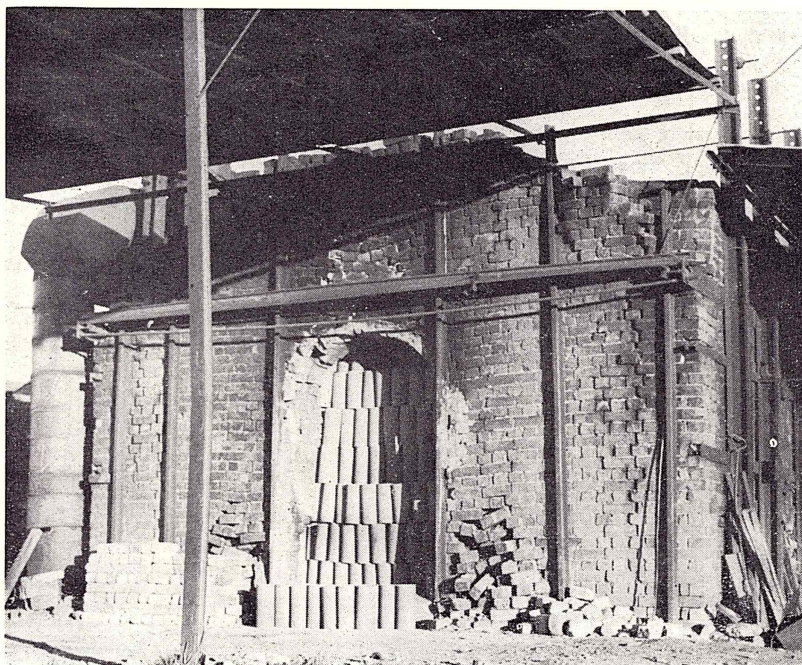
When Mr Campbell took over the works the staff numbered three or four; today fifteen produce nearly 20 times the 1938 total of 100,000 tiles. Then the work was slog—shovels and wheelbarrows; today hoist trucks and bulldozers to the trick. Firing in the kilns was at times uneven; today one of the

CAMPBELL'S PIPE WORKS AT BROWNS



Above: Peter Campbell (right) discusses another expansion problem with a consultant in front of the latest extension built with bricks manufactured in his works. The section housing the continuous drying kiln is at the right. In the rear are the hills which contain the original deposits of clay used.

Below: Although demolition of the old chimney is still going on the old kilns are still adequate for some jobs. Here field tiles are stacked in before bricking up.



most modern temperature chart recorders available keeps an unblinking eye on the all-important firing processes. Frost stopped work in the corrugated iron buildings for four months or so then but today production goes on the year round as a result of heating the whole works — itself a major task.

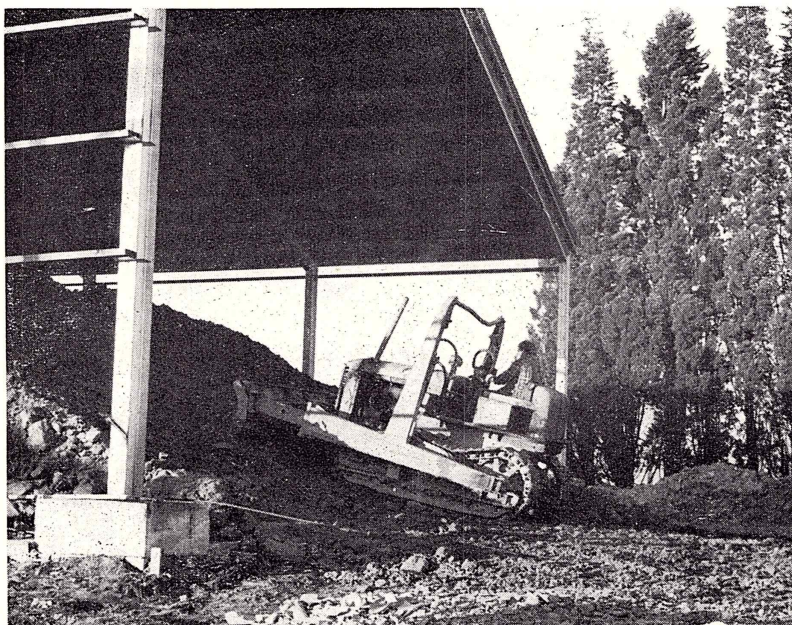
Fifty tons of Ohai coal a week plus fuel oil power the kilns today as compared with the 17 cords of firewood used per kiln in the immediate pre-war year.

Typical of the improvement that more sophisticated machinery can effect is the recently-installed tunnel kiln—the most modern of its type in the country. In fact, there are only three of these in New Zealand at present. Using this unit one man can produce in four days the same number of tiles it took eight men to produce in a fortnight! An inspection of the unit with the long files of tiles inching their way through the kiln which runs continuously brought out its efficiency quite clearly. The new temperature chart recorder cost £650 and replaces the one installed a few years ago.

"The previous one met with some opposition from some of the men," said Mr Campbell. "But now they wouldn't be without it."

Safety devices issue warnings when the temperature variations are likely to affect the quality of the tiles or when the power goes off.

Most of the tiles produced now are four-inch as compared with the more common three-inch pipe a few years ago. The Browns works makes pipes up to seven and a-half inches in diameter.



The days of pick and shovel are over in the field tile industry as well as anywhere else. Now a bulldozer is used to push this mountain of clay into the works on the left.

Bricks are rarely made today but the office built last year is made naturally enough of the local product.

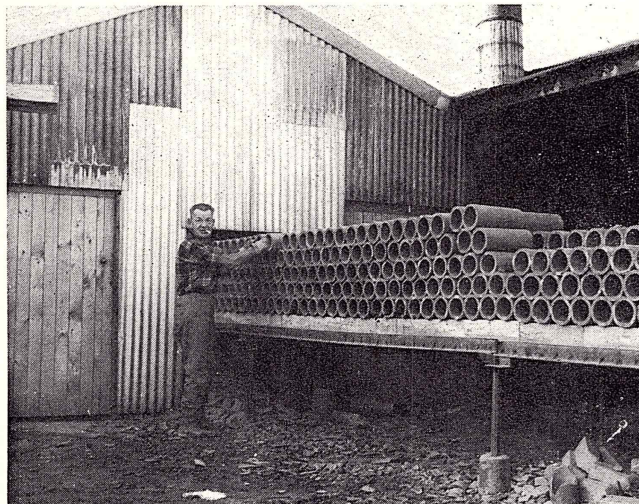
In the 26 years in the business Mr Campbell has seen another change in the usage of field pipes. The introduction of mechanical ditch-diggers has meant that the demand is no longer confined to the traditional winter period but now October and November are peak periods.

"In fact they seem to need them all the year round now," he said.

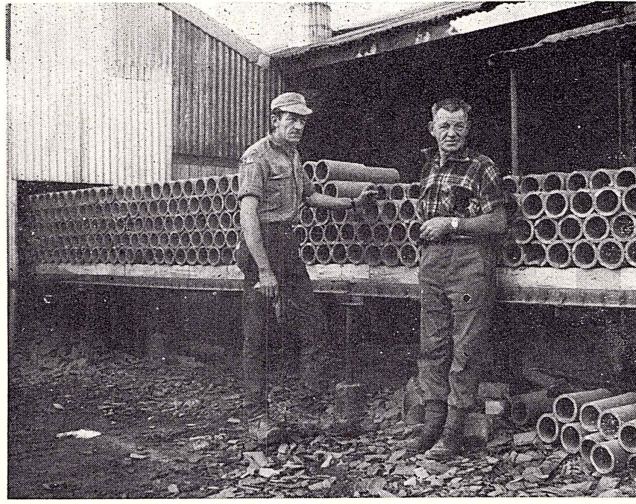
The normal four-inch pipe costs the farmer about ninepence a foot Mr Campbell pointed out. Actual cost is 73/- per hundred.

Like the iceberg Southland's green pastures have much more hidden beneath them than field pipes to ensure their productivity. But its also true that without the ubiquitous pipes in their millions Southland would be still like the description given it by an early surveyor—"a bog unfit for human habitation."

With some of the most up-to-date plant in the country Peter Campbell's unit at Browns is making sure that progress in this field isn't clogging the massive development programme currently underway in the province.



Emerging from the continuous drying kiln on this brick-based moving platform the pipes are ready for use within hours as compared with days under the previous method. A worker is seen preparing to remove some samples.



It is not always this easy but automation has its advantages these two reckon as the field tiles emerge from the up-to-date continuous drying kiln on the moving platform behind the two men. "Dead easy" was their comment in comparing the new with the old.

MAKAREWA RIVER PROJECT

Southland Catchment Board boosts farm incomes



ABOVE: Mr R. D. Young, chief engineer to the Southland Catchment Board, the man at the helm with the big Makarewa River project. RIGHT: Willow-choking like this characterised the Makarewa River for several miles from its confluence with the bigger Oreti River. The river improvement project is eliminating this problem. At this point a 20-chain cut will by-pass nearly a mile of the river and increase the flow.



A multi-strand fence far from the water bears witness to the rampages of the Makarewa River, now being tamed. The model is Miss Jenny Lind, from the office of the Southland Catchment Board.

GREAT dollops of spoil are being scooped from the banks and from beneath the dark water of Southland's potent Makarewa River, and each is worth its weight in gold.

A fortune is being spent. It will tally £620,000 or more by 1970. Within a few years from then the Southland Catchment Board's biggest project, among the nation's vastest, will have come close to paying for itself. A handsome dividend is in prospect.

THE MIDAS TOUCH

The river improvement and control project will be the Midas touch for thousands upon thousands of acres.

New Zealand Excavators launched the job at the beginning of this year with a £358,481 contract and is advancing steadily upstream. Ahead are more than 100 miles of main streams and 25 miles of tributaries to be widened and deepened and straightened.

It is work fit to catch any imagination. The 5,500,000 cu. yd of earth-works will give:

Flood relief to 18,600 acres.

Valuable drainage of 10,500 acres.

Full use of 10,800 undeveloped acres.

Full use of 12,000 semi-developed acres.

Incentive to farmers to spend a further £900,000 on land development not possible before.

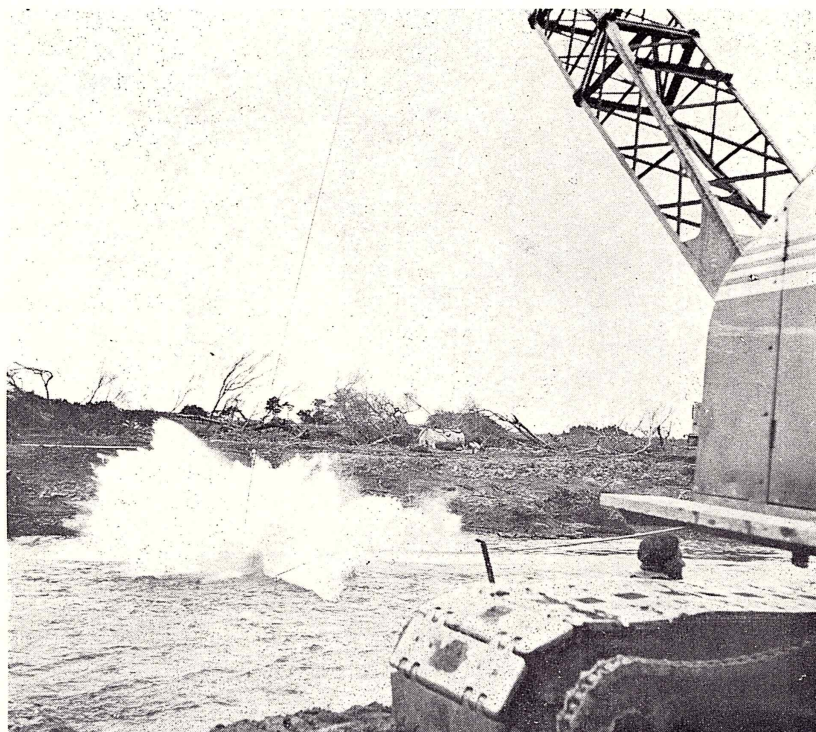
An eventual increase of £180,000 a year in the gross value of farm production.

At the heart of it all is the Makarewa's propensity to flood. The channel currently is limited to a peak flow of less than 2000 cusecs. On completion of the project it should not overflow below 7000 cusecs. Any floods caused by flows greater than that will be minor in contrast with those liable now.

Crash Programme

Yet had there not been a crash programme by the board, when nearly all other such planning went to the side for a year, the Makarewa job would be still in the melting pot.

For instance, the scheme for the 410-square mile catchment was sixth on the original programme of the board that was formed 24 years ago. Now more than 180 jobs, big and small, have preceded this one.



Makarewa River banks, once laden with willows, have been cleared here and one of the two excavators on the job shows its paces. The two one-cubic-yard draglines will be complemented soon by two four-cubic-yard machines being imported.

In those other jobs lie a further measure of the current project. Together the jobs done ahead of the Maka-

rewa have improved more than 100,000 acres previously partly-developed.

Land classification reports and economic studies of works show that the board has boosted gross farm revenue by upwards of £333,000 a year.

Yet the high figure is conservative to the mind of Mr R. D. Young, chief engineer to the board. He sees, too, the intangibles such as river-training and control leading to less flood damage and fewer stock losses.

Further Projects

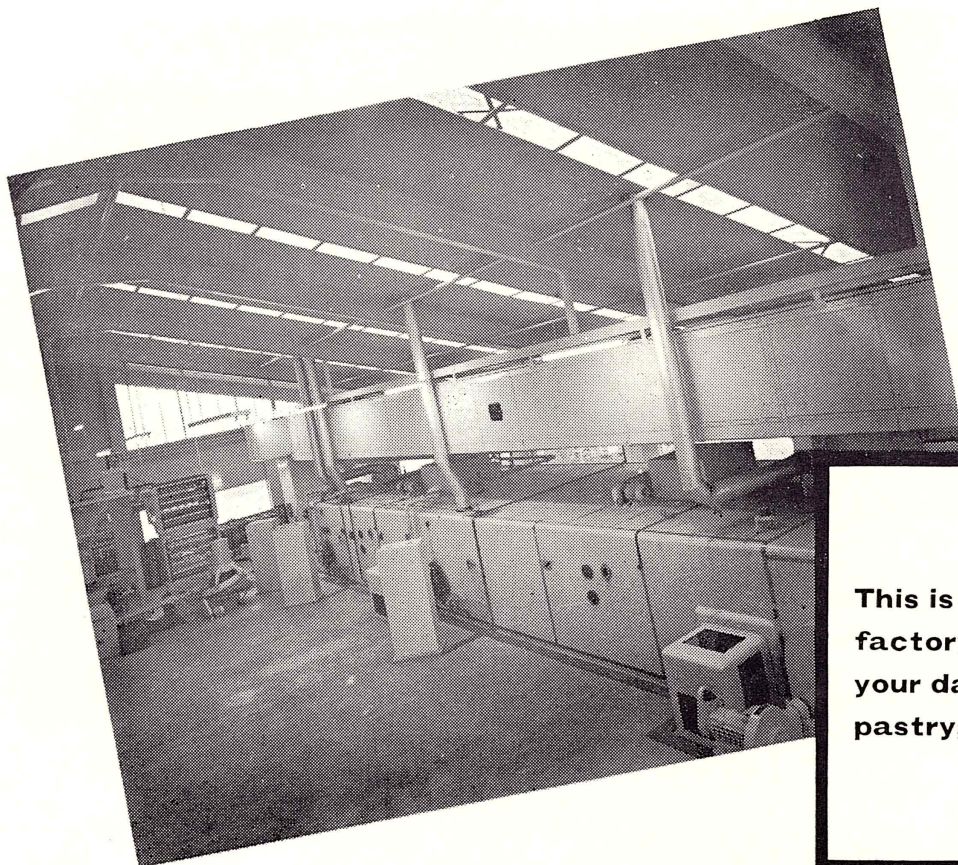
Plans for the Makarewa work began in 1958, were approved by the board in May, 1962, technically approved by the Soil Conservation and Rivers Control Council in October, 1962, and granted a £3 for £1 Government subsidy in February, 1963.

Even now the board is giving attention to another yet larger project — Oreti River improvement; the Makarewa is a lower tributary of the Oreti. The Oreti work idea remains to be proved economic.

Meanwhile, applications for work have continued to mount with the board.



Straightened, deepened and banked, the Makarewa River here is becoming controlled. Up to 200,000 cubic yards of spoil have been excavated so far in the five-year job. The Southland Catchment Board's chief engineer, Mr R. D. Young, inspects work.



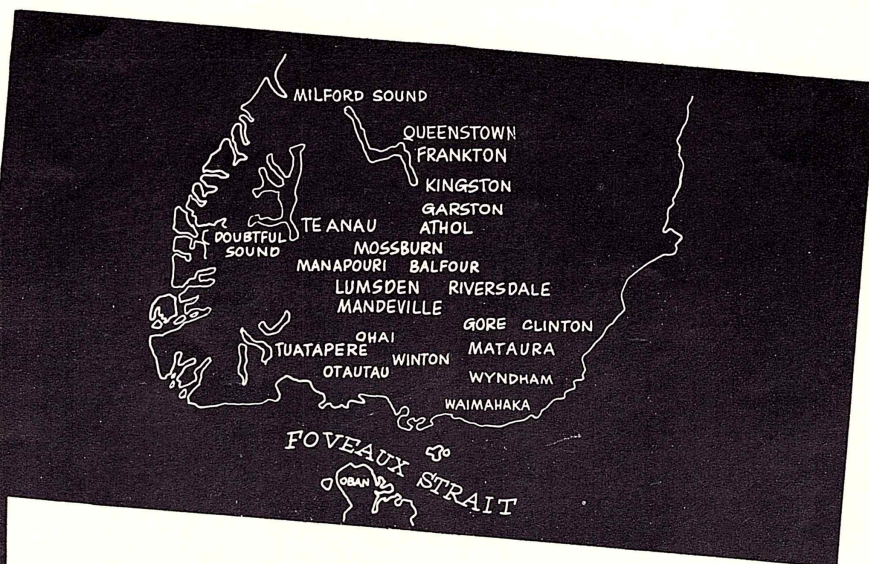
MODERN FACTORY

This is the modern
factory which produces
your daily bread and
pastrygoods

WIDE DISTRIBUTION

OUR
FLEET
COVERS
5,500 Miles
EACH WEEK

It's part of our
immediate service
to the people of
Southland.



LANGES

BAKERS & PASTRYCOOKS 172 TAY STREET INVERCARGILL

INDUSTRY

Facilities Offered:

Power • Water • Public
Services • Local
Authorities • Government
Departments • Population
Printing.



PRIMARY PRODUCE

Food Production
Fertiliser • Stock Foods
Wool Production • Meat
Production • Dairy
Products.

TRANSPORT

Motor Vehicle & Servicing
Railways • Airways
Shipping • Harbour
Facilities.

A WAY OF LIFE

Cultural Facilities • Sport
Opportunity • Education
Accommodation • Health
Real Estate • Holidays.

CONSTRUCTION

Homes • Commercial
Buildings • Furniture &
Fittings • Joinery
Appliances • Plumbing &
Drainage • Aggregates
Builders' Supplies
Engineering • Concrete
Products.

GORE

EXPANDS

GORE is situated on the banks of the Mataura River at the junction of the valleys leading east to Central Otago and Dunedin, west to Fiordland and south to Invercargill and the Southland Plains.

Around the mid-1880s settlers came to the area, then known as Longford, and established sheep runs. In 1862 the first sections were auctioned and the town was named Gore after Thomas Gore-Brown, the then Governor. The town and district progressed rapidly as

the climate and good pastures favoured farming.

To cater for the demands of the farmers and the townspeople a railway was opened in 1875 and it has since played an important role in the transportation of farm produce.

The first flour mill was built in 1878 and although it was later razed by fire, it was rebuilt and stands today as the largest cereal producing concern in the Southern Hemisphere.

Having come through floods, drought and other setbacks virtually unscathed, Gore now boasts a population of 8100 which is supported by a rich farming district and a number of industries.

The town is attractively laid out with wide, tree-lined streets, and beautiful parks and gardens. The sporting attractions and activities and the large, modern shopping centre cater for every possible requirement of the resident and tourist alike.



The main street of the Gore commercial centre.



MR J. C. McLEOD, J.P.,
Mayor of Gore.

GORE BOROUGH COUNCIL

P.O. BOX 8, GORE.

MAYOR: J. C. McLeod, J.P.

TOWN CLERK: R. G. Winwood.

BOROUGH ENGINEER: R. C. Buchanan.

AREA: 2330 acres.

POPULATION: 8100.

RATEABLE VALUES: Capital £10,783,325
Unimproved £2,174,985

SYSTEM OF RATING: Unimproved values.

GENERAL RATES: 1965 — £52,272.

SPECIAL RATES AND LEVIES: 1965 — £40,699.

Harbour Board and Catchment Board Rates 1965 — £8071.

LAND FOR INDUSTRY:

A 60-acre Industrial Complex is available. The land is cheap in comparison with industrial land in the neighbouring cities and can be purchased on a deferred payment basis or by other arrangements to suit. The land may also be leased. Ample land in the various commercial and industrial categories is available from private owners.

Unlimited Opportunities for Manufacturers and Businessmen

By J. C. McLEOD
Mayor of Gore

THE steady growth of Gore over the years can be largely attributed to the highly productive farm lands of the surrounding eastern and northern areas. West Otago also contributes to the growth and prosperity of the town. Civic leaders have ensured the progressive development of the town by providing adequate services and amenities. Gore is the natural business centre for an extensive area populated by over 20,000 people all of whom regard the town as their own business centre.

The opportunities for manufacturers and businessmen appear unlimited.

The wealth of the district and its farmers is renowned.

Gore is the second largest town in Southland.

It is situated on the main trunk railway.

State highways link Gore with the modern port of Bluff.

Low cost council owned sites with sealed roads, sewerage, water, power and rail sidings are now being developed and are available for industry.

A feature of the situation of Gore is the accessibility of a variety of scenic attractions, ranging from the glories of Fiordland and Lake-land to the rugged grandeur of Central Otago, the virgin bush, the sea scopes of the East Coast and the impressive rolling farmlands of the Southland Plain.

Ease of access to many of the world's best fishing rivers and to a number of outstanding deer stalking areas, makes Gore the focal point of a sportsman's paradise.

Gore welcomes industry.



ABOVE: A panoramic view of part of Gore taken from the air.

BELOW: Gore is generously endowed with playing fields and scenic reserves which receive the careful attention of a well equipped Reserves Department. Pictured is a winter scene in the Central Municipal Gardens.



CENTRE of perhaps the most bountiful farming district in New Zealand is the thriving town of Gore, a municipality which celebrated the centenary of its foundation three years ago. In the passage of most of those 100 years the progress of the town has been a steady forging ahead rather than a spectacular leap forward, a consolidation of the pioneer's work and then controlled development of it, free of the worrisome growing pains that have afflicted other communities. But latterly the pattern has been changing, and growth has taken on a spurt, still, however, well within the compass of a borough so soundly founded.

Population, as revealed by the latest census, has gained by 11.2 per cent in five years, and living now within the borough are over 8100 people. It is a population which is becoming younger, and with the expansion of commerce,

the growth of servicing and other light industry more people not long started out on family life are making the town their home. A glance at school roll numbers is sufficient confirmation of this trend. By the end of next year the roll at the East Gore Primary School, at the heart of a fast-growing residential area, will have jumped by over 41 per cent on the figure at the close of 1962, and the increase could be greater, for the current estimate is based on a survey taken in 1964.

Gore has a co-educational high school in which the roll is rapidly approaching 1000, and to be opened in a year or so is a church boys' college which will have a ceiling roll of about 600. The High School draws its pupils from the town and the region of which it is the centre and in which a new district high school has been opened and existing outlying schools are expanding at secondary level.

A full range of educational facilities is available or programmed within the borough, including a proposed intermediate school, and suggested for Mataura, one of the Gore Borough's satellite towns, is a new Form 1 to 6 high school.

Building Expansion

Indicative, too, of population trends is the number of houses being built



A vast area of grain is harvested annually, the bulk of which supplies the Creamota mill. The picture is a view of harvesting operations in the eastern Southland area.

each year. Over each of the past several years the Borough Council has issued 50 to 60 permits for housing, which does not include dwellings built by the State.

A barometer pointing to a town's economic well being is the value of private building work, and at Gore in two of the last three years valuation has exceeded £413,000. Valuation of all classes of building construction at the

end of 1965 was £413,434, and 1963 closed with a return of £437,125. Much of this costing is related to housing, but in the three-year span commercial, educational and light industrial construction has occupied an important place, too.

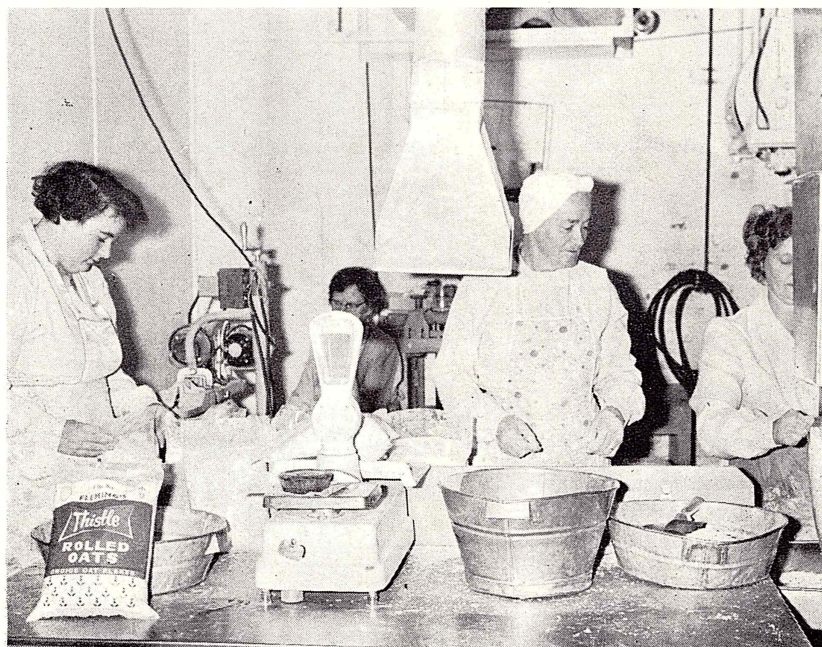
Prosperous District

The prosperity of the Gore district is underlined by the 1963 census of distribution report, which covered the trading of retail establishments in centres with populations of 4000 or more. The highest per capita spending was recorded by the report at £840 for the Gore Borough. Next highest spending was the £752 noted in Whakatane.

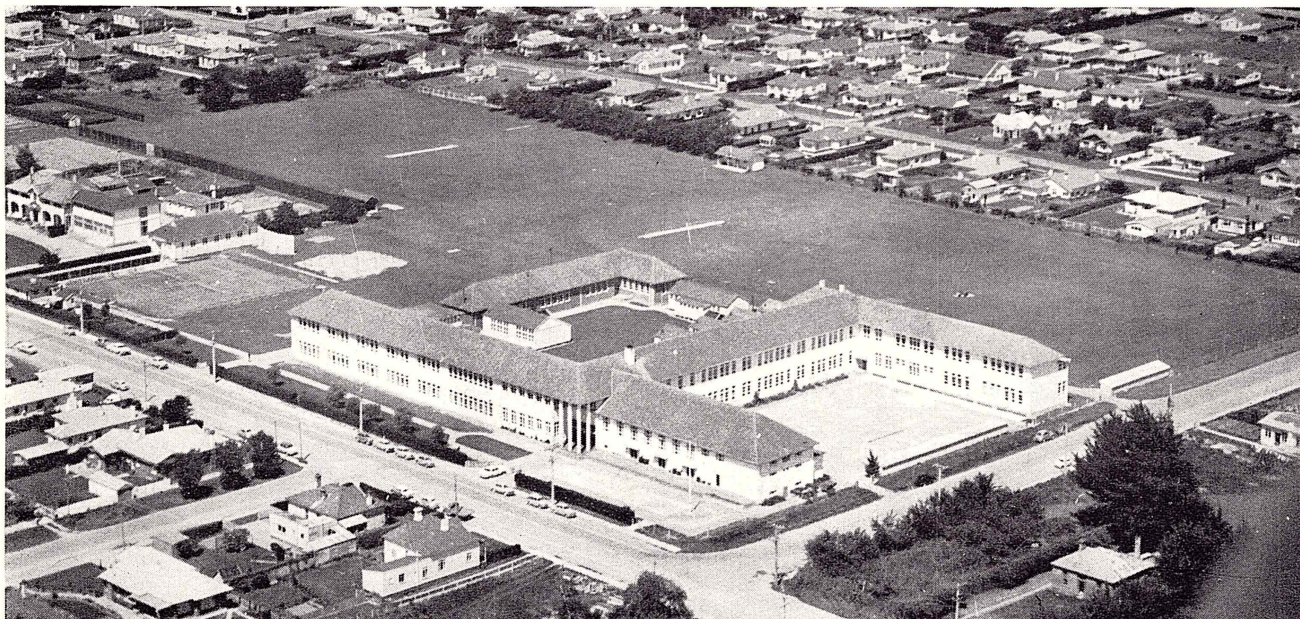
No clearer indication of the growth of the borough can be obtained than by an appraisal of property valuations. In 1955, the unimproved value of the borough was £739,697, a figure which had grown to £2,174,985 in 1966. The value of improvements 11 years ago was shown at £4,648,288, and this total had climbed to £8,608,340 this year.

Zoning for Industry

Until comparatively recent years industry had had to find its own way into the town. Now, as a result of a progressive local government policy, an industrial complex has been especially set aside, and it is being subdivided, roaded and serviced by the local body. The Gore Borough Empowering Bill,



The Fleming Creamota Mill is Gore's largest industry. The picture shows staff at work in a section of the mill.



An aerial view of the Gore High School, a co-educational school with a roll of 950.

which enables land to be bought and developed for industry, made local government history in New Zealand.

Present land usage for residential purposes covers an area of some 650 acres, and another 500 acres is available, giving abundant room for greater population. The town is situated in a vitally strategic position at the junction of the two major State highways in the pro-

vince of Southland, which, according to a 1963 estimation, has developed its farmlands to within only 50 per cent of their true potential. These things evidently weighed heavily with the New Zealand Meat Producers' Board committee of inquiry in its favourable recommendation for the siting of the next South Island freezing works near Gore. They may also please other industry

and the average New Zealand citizen looking for pastures new and thriving.

But figures and other statements of cold fact do not complete the picture of Gore in its role of an expanding and progressive centre. There is the more human consideration of sociology.

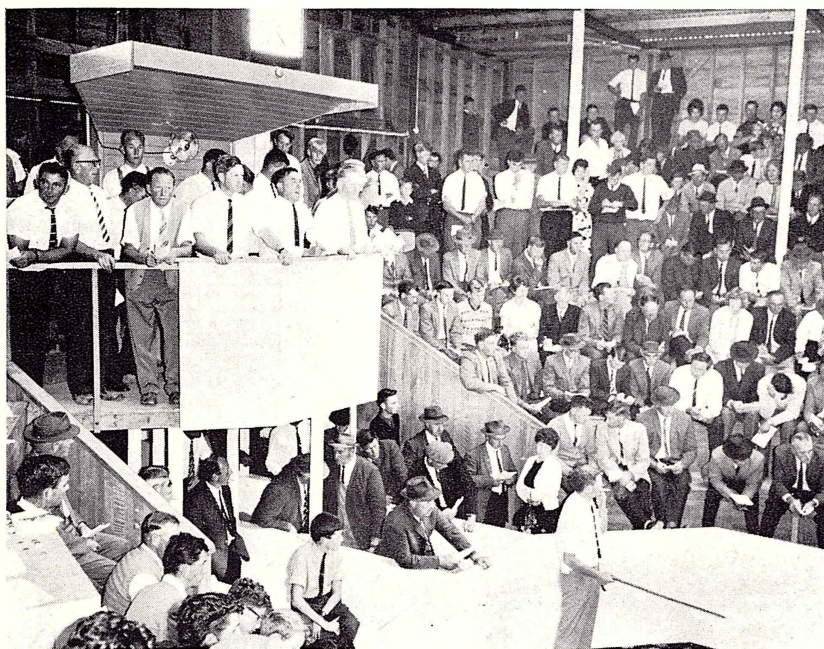
Cultural Centre

Gore is about to blossom forth as a place of culture. The linch-pin of this growth of attention to the arts is a project to build a civic centre catering for a great many needs. Proposed is a large hall, reading, writing, lecture and meeting rooms, a fully equipped theatre, a winter garden. First step in the project will be the building of a new administration block for the Borough Council.

The civic centre will not, of course, be confined to the arts. It will be a place for hobbies clubs and sports organisations and a meeting place for senior citizens. The town already has one fine indoor sports stadium used for swimming in the warmer months and indoor basketball in winter.

Sports Facilities

Endowed with a number of first-class playing fields, Gore is a natural home for sportspeople. One of the more recent developments has been an area of some 35 acres on which a combined sports association lately opened a pavilion costing almost £10,000. There can be no doubting the quantity and quality of the town's reserves for both active and passive recreation.



Gore is a major stud stock selling centre. Record prices are obtained at the annual Romney Ram Stud Fairs and this picture is taken during a recent sale in the special selling pavilion in the Gore A. & P. Showgrounds.

MANUFACTURING

GORE has a number of industries providing employment for both the male and female labour forces. These industries are varied and many of them are in some way connected with farming, and supply the farmers of the area with implements, fertilisers, etc. The industries already established include light clothing industries, the manufacture of foodstuffs, electrical industries, agricultural machinery, fertiliser plants and many others. Although some of these industries are small they play their part in serving the needs of both the town and rural communities.

The following is a list of manufacturers in and around the town of Gore:

Anderson, D. A.

Brigg's Tile Surrounds Co.

Campbell, A. D. & Co. Ltd

Duncan, A. G.

Dunlop Furniture Co. Ltd

Eastern Southland Butchers'

By-Products Ltd

Fea Concrete Southland Ltd

Fleming & Co. Ltd

Gore Brick Co. Ltd

Gore Concrete Products

Gore Implement Exchange

Gore Mirror & Glass Co. Ltd

Greenfield, L. H. Ltd

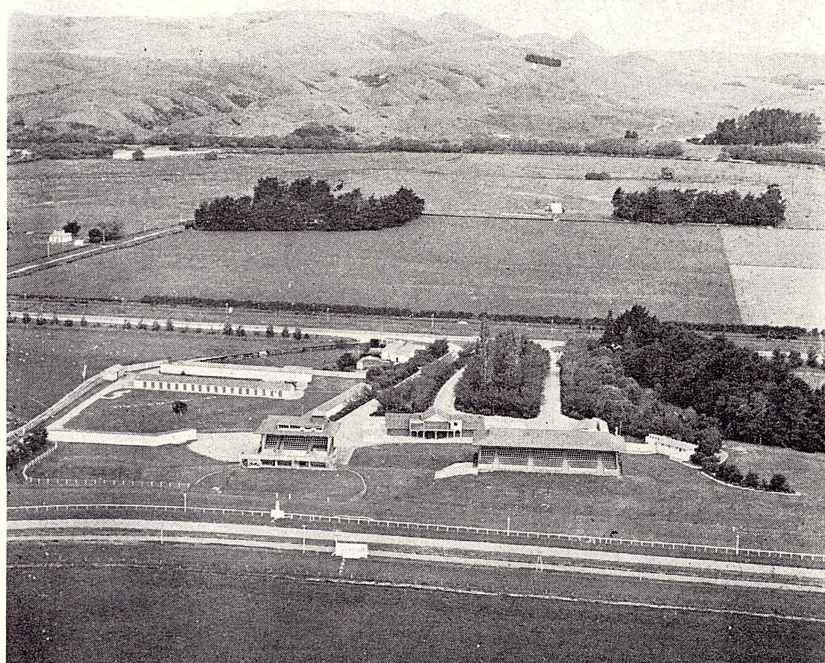
Holmes, W. H.

Howden, Jas. & Co. Ltd

Longford, Furniture Ltd

Lowe, H. P.

Lynwood Products Ltd



An aerial view of the Gore Racecourse, renowned for its magnificent blossom display in the spring.

McArthur's Knitwear Ltd

McBride Bros. Ltd

McDonell, R. G. Ltd

McDougall, E. D.

McGill's Concrete Ltd

North End Farm Supplies

Ramage, N. A.

Rhodes, W. & R.

Southland Co-op. Phosphate Co. Ltd

Stekbauer, Karl

Turnbull's Saddlery Ltd

Vibrapac (Otago) Ltd

Wallace & Cooper Ltd

Ward, J. G. & Co. Ltd

Watson, J. E. & Co. Ltd

Weir, W. M.

Whitcombe & Tombs Ltd

BUILDING

GOE HAS a strong force of Master Builders available to undertake any project, large or small. This includes the construction of industrial premises, office blocks and private homes. The following are members of the Gore Master Builders' Association:

Allott & Evans

Anderson, D. A.

Archer Building Contractors Ltd

Dickey, G. E.

Gilder, D. S.

Gore Construction Co. Ltd

Hewitt, A. R. Ltd

Hewlett Bros.

Jones & Cooper

Kelly, R. B.

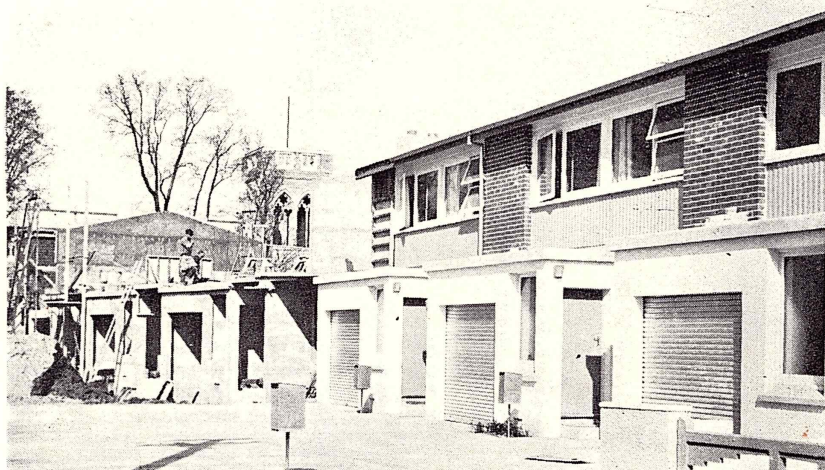
Lowe, H. P.

MacGibbon, R. P.

Mills, A. J.

O'Connor, P. D.

Rhodes, W. & R.



Commercial and housing construction is at a high level in Gore. Here is an attractive block of flats under construction. Other similar blocks of flats are also being built.

GOVERNMENT DEPARTMENTS IN GORE

Agricultural Department
N.Z. Express Co. Building.

Air Department
RNZAF Training Corps, Avon Street.

Army Department
Sub Area Office, Avon Street.

Electricity Department
Southland Electric Power Supply
Office 23 Medway Street.
Substation Charlton Road.

Health Department
Hamiltons Building, Main Street.

Justice Department
Court House, Main Street.

Ministry of Works

Police
Police Station, Main Street.

Post Office
Main Street.

Public Trust Office
Mersey Street.

Railways Department
Registrar-General's Department
Court House, Main Street.
Scientific & Industrial Research Department
Grasslands Division Research Station.

Social Security Department and War Pensions Office
Main Street.
Transport Department
Traffic Inspector, Main Street.
Vehicle Testing Station, Miro Street.



The Learners' Pool in the Centennial Baths. The pools are heated, a modern filtration and chlorination plant is installed.



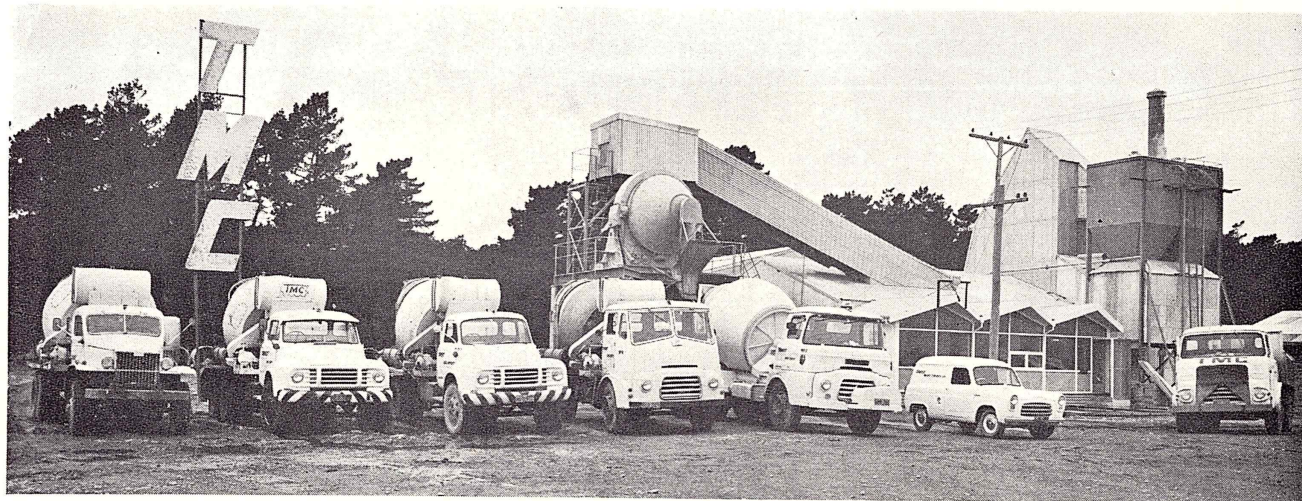
Pictured is Dolamore Park, probably the most popular picnic place in Southland. The park has been developed in the midst of the native bush of Croydon Domain in the Hokonui Hills. A tea kiosk of ultra modern design graces the park. The Croydon Domain contains an area of 2360 acres.

DOLAMORE BEQUESTS

PRIOR TO his death in 1947, Mr J. H. Dolamore, prominent citizen of Gore, donated sums totalling £20,000 to the borough of Gore and other local institutions. These gifts were to be used in the physical and intellectual welfare of the young people of the district.

Under his will the Dolamore Trust was formed with a capital of approximately £20,000. Mrs Dolamore's will provided for a sum in the vicinity of £30,000 to be used in the development of the Croydon Domain.

These generous gifts have been well used and have provided fine outdoor amenities. Land near the Waimumu Stream has been named Dolamore Park in memory of the donors, and it has been developed to make an excellent picnic resort.



Part of the T.M.C. agitator fleet, Invercargill.



HEAD OFFICE . . . 287 DEE STREET, INVERCARGILL. P.O. BOX 1104

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READY MIXED CONCRETE — CONCRETE PRODUCTS — SAND & AGGREGATES

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GORE

EDENDALE



Fea Concrete Industries Ltd is a Public Holding Company, with subsidiary companies Fea Concrete (Southland) Ltd operating concrete product plants at Gore and Edendale ready mix plant at Gore and Transit Mixed Concrete Ltd operating Ready Mix Concrete Plant at Invercargill, and Sand and Aggregate plant at Oporo, 10 miles from Invercargill.

The company operates the only rod mill for sand manufacture in Southland, production from which provides sand to highest degree of technical requirements. A new department specialising in fabrication of pre-cast units for use in industrial and commercial building is starting shortly.

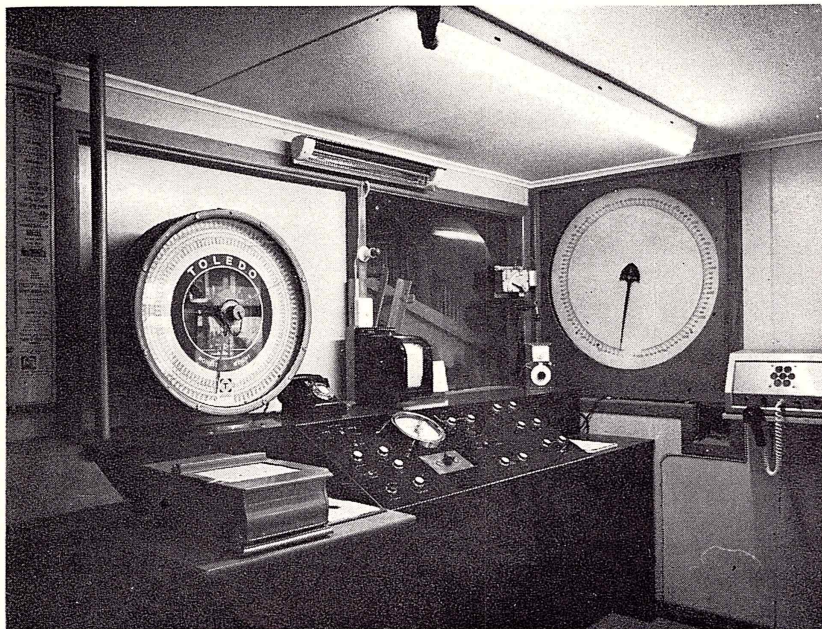
Ready Mixed Concrete is produced to meet highest technical requirements, the T.M.C. Invercargill plant carrying a N.Z.R.M.C.A. Grading for Special Grade.

FEA CONCRETE INDUSTRIES LTD commenced operations at Edendale in 1953 producing concrete products mainly for farm use.

In 1959 the Gore factory was opened and a Ready Mix Concrete plant installed in 1961. This plant operated with one vehicle. Also in 1961 the firm of Transit Mixed Concrete Ltd was opened in Invercargill with a fleet of three ready mix trucks.

The next step in the company's expansion was the acquisition of an aggregate producing plant at Oporo in 1963. Since then new plant has been installed, including specialised sand-making equipment.

Situated at Waikiwi, Invercargill, Transit Mixed Concrete Ltd operates a highly mechanised remote controlled electronic control system for concrete production. A feature of the company's operations is the laboratory work which is carried out continuously. The laboratory at Invercargill also does work for the Gore factory.



LEFT: Control panel — T.M.C. Ready Mix plant, Invercargill.

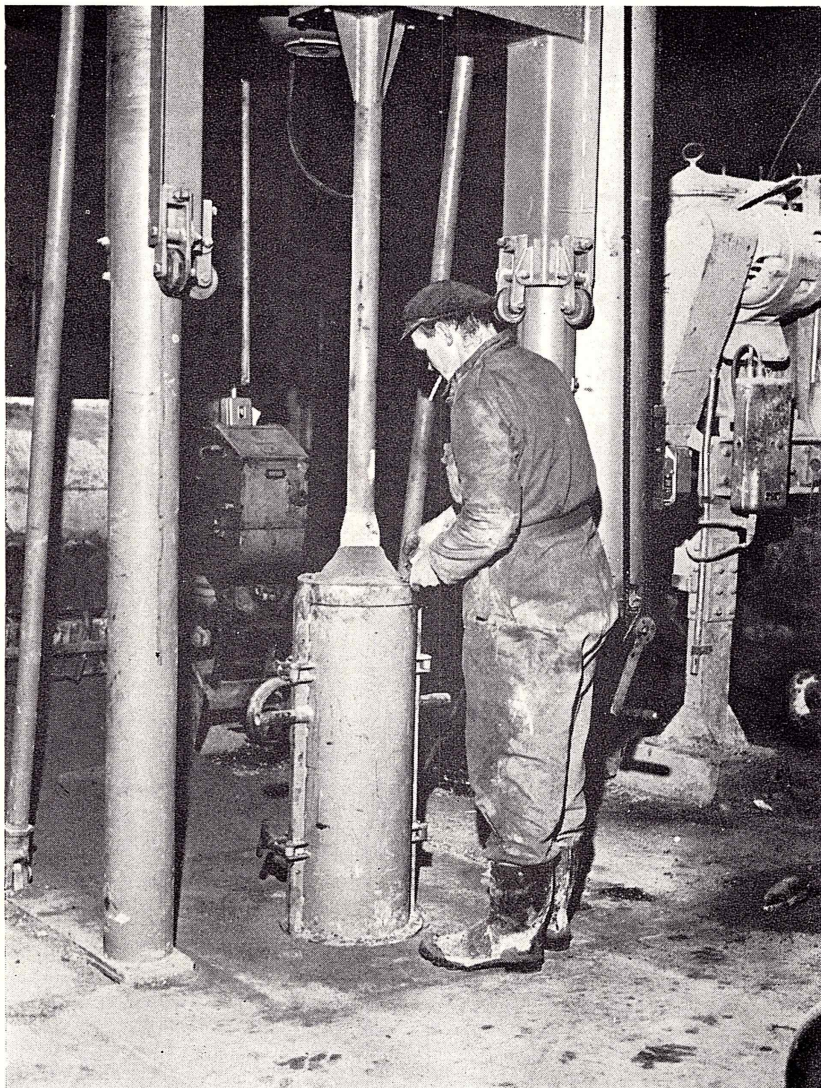
BELOW: Pipe making at the Gore factory.

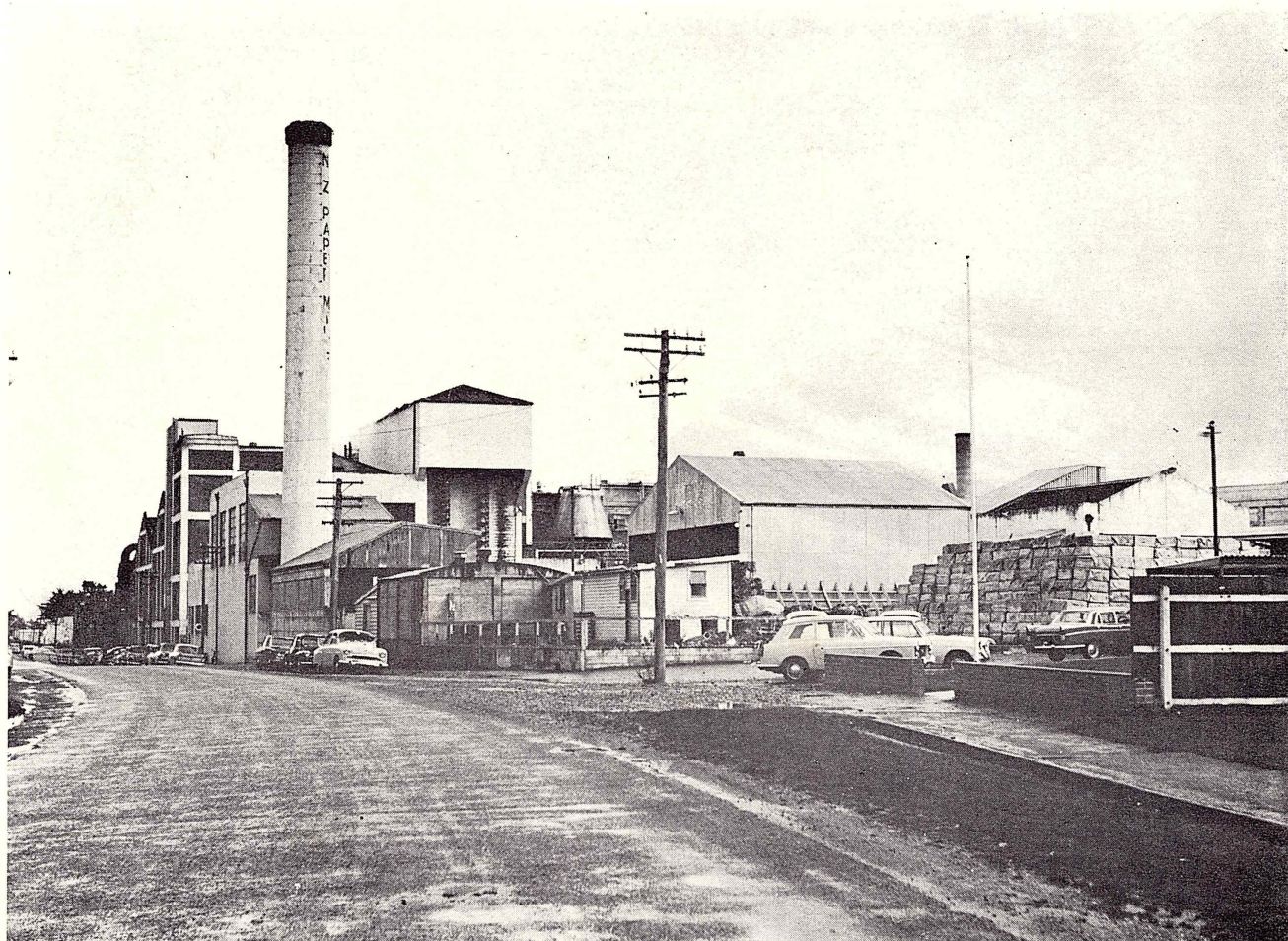
Today the company operates a total of 28 vehicles, including 11 large-capacity Ready Mix trucks. The Gore factory occupies in excess of 10,000 sq ft on a 7 acre land site, and carries the most modern equipment available. It operates the only Rod Mill for sand manufacture in Southland, production from which provides sand to the highest degree of technical requirements. A new department specialising in the prefabrication of precast units for use in industrial and commercial building will shortly come into operation. Ready Mixed concrete is produced to meet the highest standards, the Invercargill plant carrying a NZRMCA grading for Special Grade.

As the Southland area has developed the demands on the resources of Fea Concrete Industries have become greater, as is indicated by the production figures. During the past 12 years the company has produced between 2500 and 3000 water tanks and in excess of 1½ million fencing posts. This is equivalent to two concrete fences joining New Zealand to Australia with a water tank each half mile.

The annual turnover has increased from £18,000 in 1953 to in excess of £½ million today, and it is still increasing steeply.

Since their beginning Fea Concrete Industries Ltd have certainly lived up to their slogan "Service — Integrity," contributing to the development of Southland with their fine service and products.





New Zealand Paper Mills, Mātaura.

NEW ZEALAND PAPER MILLS LTD.

Papermakers for 90 years

FOR half a century Mātaura, with a small satellite mill, was New Zealand's total paper industry. During the two wars it produced a variety of papers from all sorts of unlikely materials. Some of the sheets would scarcely have pleased the modern printer, but on the whole these wartime papers were very good considering their origin.

When the mill began to show signs of age a decision had to be made as to whether the whole mill would be renewed or whether it would be left to work itself into ruin. They decided on the former.

Mātaura approached its task in three ways. First the auxiliary services had to be modernised and secondly the paper machines extended. The third step was to enter and become established in the field of high-quality woodfree papers.

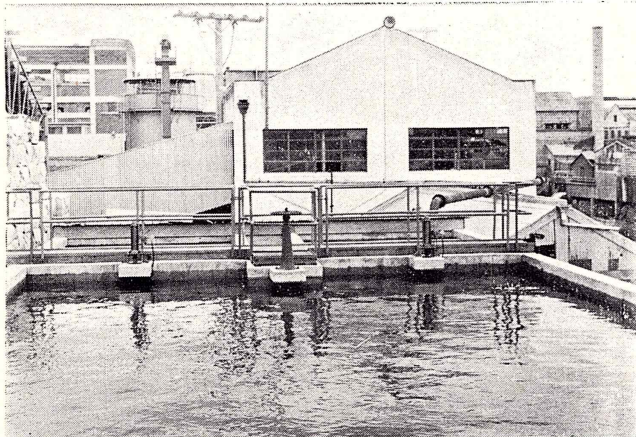
Mātaura accomplished these things by teamwork. A dedicated team was built up — a team willing to work hard and take pride in and be encouraged by each new achievement. But teamwork alone could not succeed without the tools, and most of the plant had to be reconstructed, and many alterations and improve-

ments changed the face of the Mātaura mill.

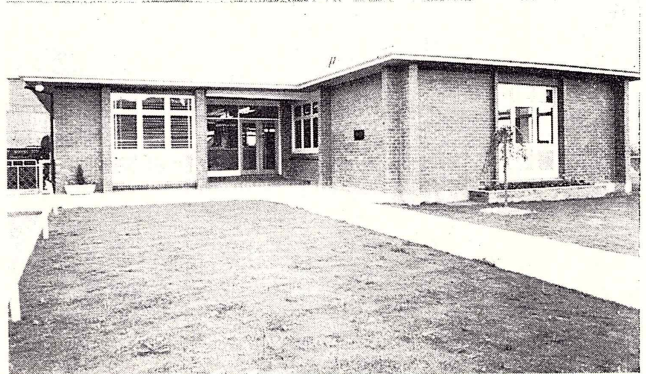
Today the mill works on the principle that quality is more important than volume of production.

The project, with the improvements, is aimed at increased production, the production of high-grade papers not previously made in New Zealand, and greater all-round efficiency. This policy can only result in the benefit of the New Zealand economy and the shareholders.

Some years ago the cry was "Mātaura can make it," Today it is "Mātaura has made it."

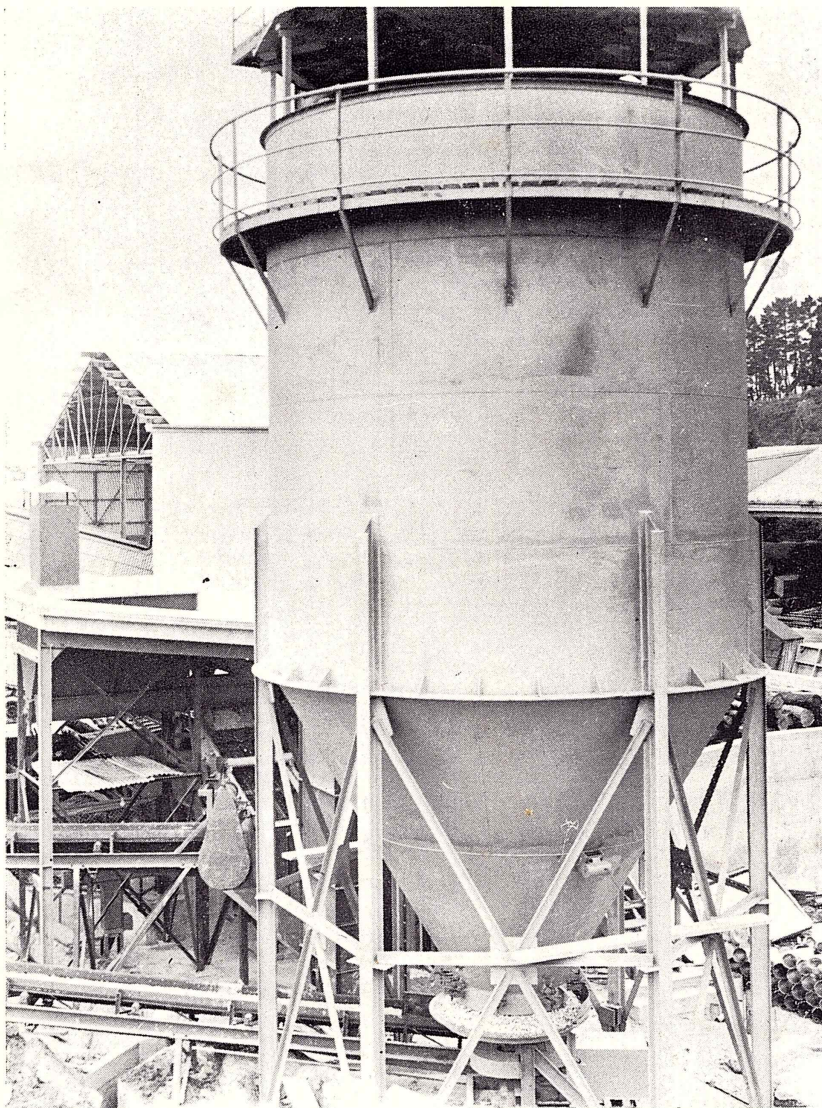


ABOVE: Water treatment plant.



N.Z. Paper Mills' new office block.

BELOW: Chip silo of the new wood handling plant with a capacity of 6000 cu. ft.



MAKERS OF:

Woodfree Duplicators, Bank Bond and Writing Papers, Sandow Wrappings, Brown Paper Bags made from Pure Kraft Pulp.

New Zealand Paper Mills was established at Mātaura in 1875. By 1960 the original and subsequent machinery had aged to such a degree that an extensive modernisation programme was decided upon. Although the work has been going on continuously since then, it is only in recent times that obvious signs of real progress can be noted at this the oldest of New Zealand's paper mills.

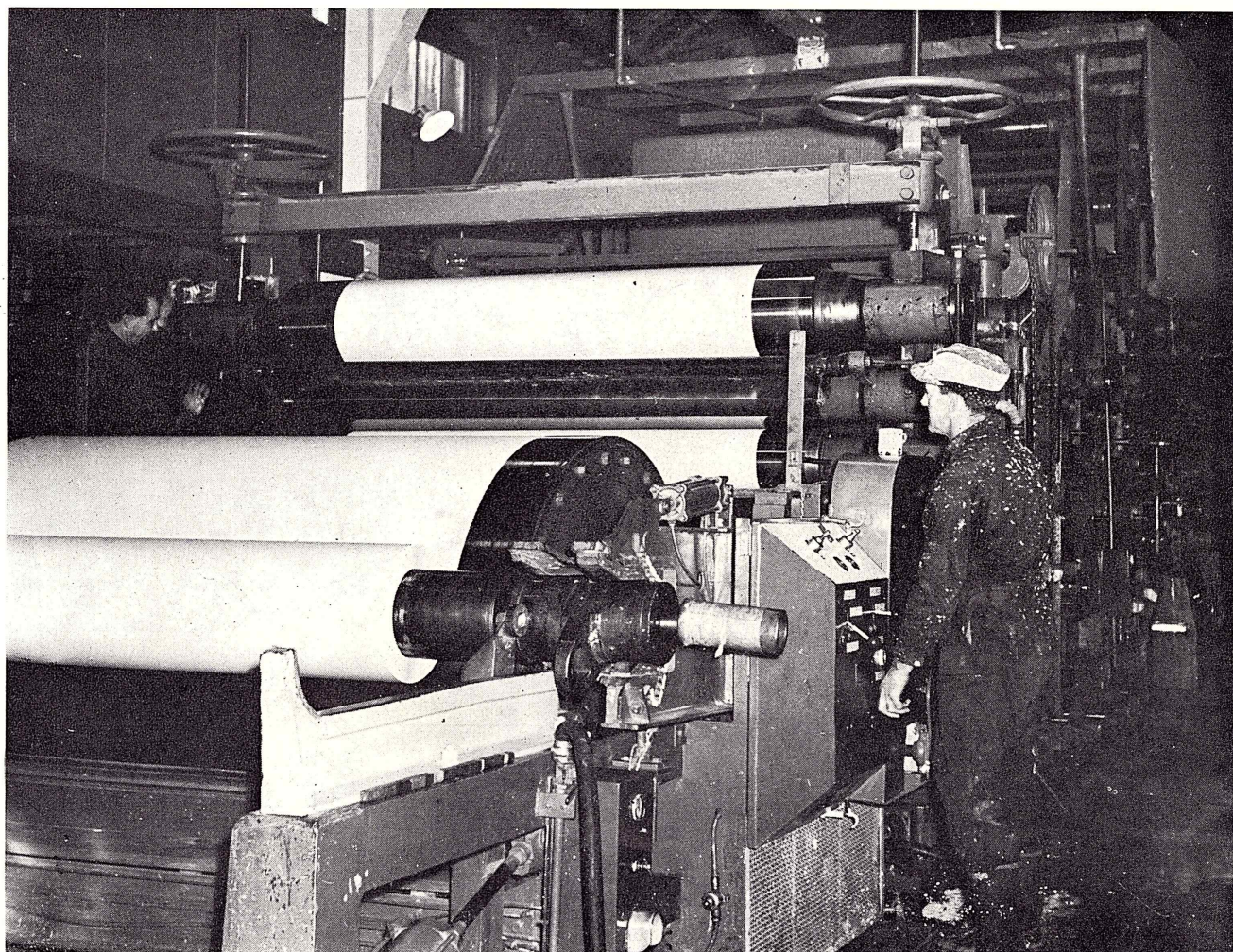
Diversified Production

As a result of the modernisation programme, Mātaura is now equipped to produce such diverse paper qualities as white and coloured writing and printing papers; envelope and duplicator papers; base paper for New Zealand's two Wallpaper manufacturers; brown, white and coloured wrapping papers; and numerous specialty papers.

A large volume of water is used in the papermaking process, and it is essential that the water used in making food wrap and fine quality papers should be clean. Therefore, one of the first projects of modernisation was the erection of a water treatment plant to supply 750,000 gallons per day of purified water.

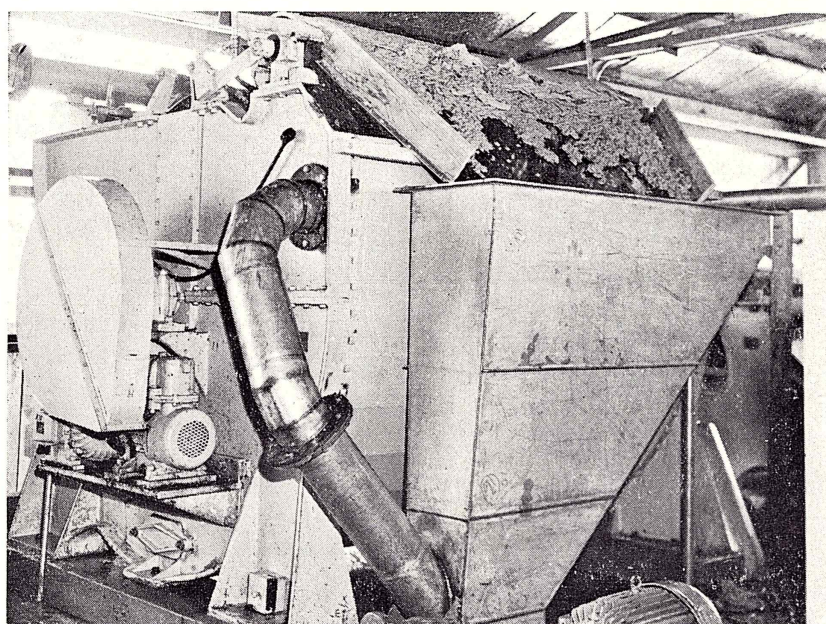
Raw Material

Cellulose fibre is the main raw material for paper, and the papermaker



No. 1 Machine.

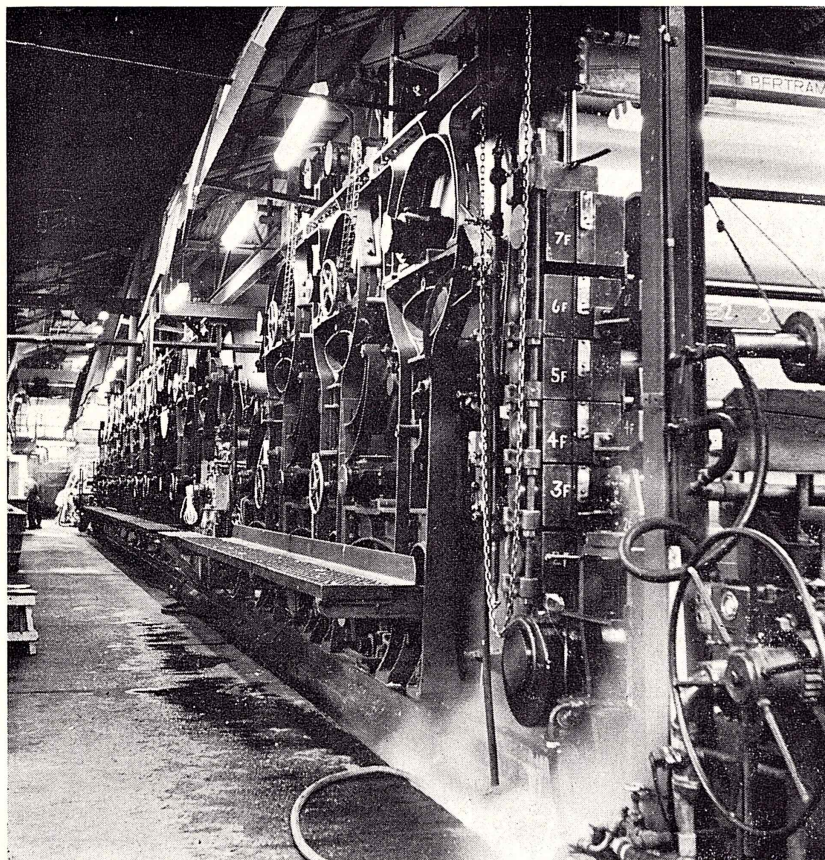
BELOW: Waste paper plant showing the Watford decker. This has a capacity of 26 tons per day.



blends various fibre types to give individual characteristics to the different types of paper. Paper making fibres are produced by chemical or mechanical separation of the fibres from the fibrous stems and leaves of plants. The Mataura Mill is too small to operate an economical size chemical pulp mill, and consequently these pulps are imported from the North Island and from overseas.

Recent Development

A new method of producing mechanical pulp with refining machines has recently been developed in North America, and this method has been adopted at Mataura. In this process the bark is removed from *Pinus Radiata* logs which are then reduced to chips. These chips are passed through Disc Refiners which in turn reduce them to pulp. After screening and centrifugal cleaning the pulp is ready for blending with chemical fibres for formation into paper.



No. 3 Machine was built in 1935. It is an M.G. machine meaning that the paper is dried by being pressed onto the surface of a single large diameter steam heated cylinder which imparts a glazed surface to one side of the sheet. The machine was originally designed to make tissue and lightweight papers, but these papers were uneconomic at the relatively slow speed of this machine. The machine has been modified to make a range of medium weight wrapping and bag papers, buff envelope manilla, poster papers, and bread wrapping.

The annual production has been increased during this period of reconstruction from 7,408 tons in 1959 to 12,883 tons in 1965. This increase in production necessitated an increased capacity in auxiliary services. More coal, steam, and electric power is required, more paper has to be sorted and packed for despatch, more raw materials and more paper to be transported to and from the site.

Consequently, these departments have had to be expanded and modernised to keep pace with the growing rate of production. The labour force has also increased from 230 in 1959 to 307 in 1965.

ABOVE: No. 2 machine.

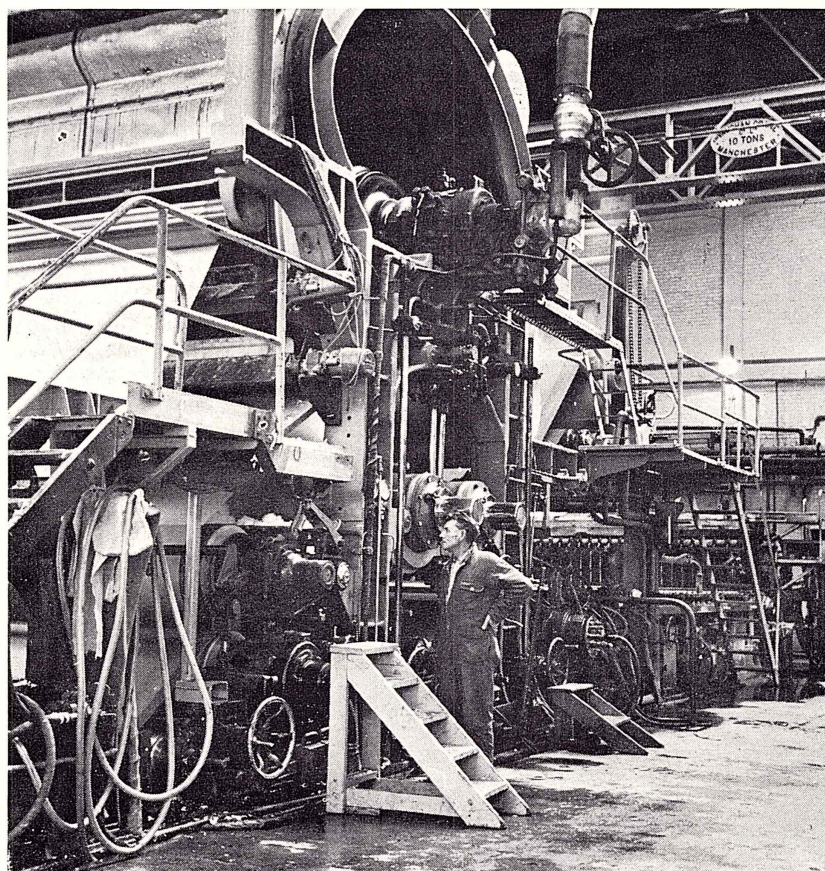
RIGHT: No. 3 machine.

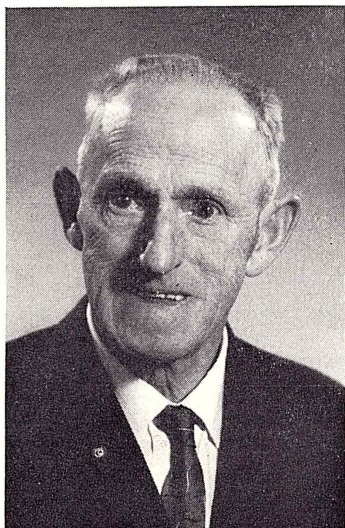
The Three Machines

There are three paper making machines at Mataire and these units had to be brought to an efficient operating condition before starting production of fine papers.

No. 1 Machine is the oldest machine and was laid down about 20 years after the mill was first built. By 1960 old age had ground the machine to a halt and it was under the threat of the wrecker's hammer. However, it was granted a reprieve and has now been refitted with an Electronic drive, the drying section reconditioned and extended, and new reeling equipment.

No. 2 Machine was built in 1922 and had become technically obsolete and uneconomic. It was reconditioned in 1962 by the installation of a new wet end, a Ward Leonard set drive, and reeling equipment. The machine was also fitted with watermarking and surface sizing devices.





MR S. J. L. McKELVIE
Mayor of Mataura.

Message from the Mayor

MATAURA, at present, is the fourth fastest developing inland town in New Zealand.

Primarily an industrial town, Mataura is well served by the freezing works, paper mills and dairy company. These

three industries provide employment for approximately 1000 men.

Due to the rapid expansion of the town, sections have been almost at a premium. However, the council is at present developing a 130-section block which will cater for the town's needs for a few years.

The town is well serviced by water with a new £50,000 filtration plant completed in 1963.

There is ample room in Mataura for expansion of industry, especially light industry, and I would welcome any inquiries.

MATAURA BOROUGH

SEVEN and a half miles south of Gore and 32½ miles north of Invercargill lies the industrial town of Mataura.

As well as being surrounded by a rich farming area, Mataura is in the centre of a coal belt which stretches for miles in most directions. This belt is largely untapped and could well develop into a vital industry in the years to come.

Transport

Being on the main line north, Mataura has no transport worries. It is served by rail and bus. Three miles north towards Gore is the Charlton Airport which is served by NAC and connects with the main air routes further north.

Accommodation

The Mataura Licensing Trust already has a tavern at Mataura and a start has been made on other accommodation. There are various spots along the riverside for caravan accommodation and it is envisaged that the Maori Tuturau

MATAURA BOROUGH COUNCIL

P.O. Box 14, Mataura. Phone 7.

Mayor: S. J. L. McKelvie.

Town Clerk: I. S. Watson.

Borough Engineer: Consulting Engineers, Duffill, Watts & King.

Area: 2 square miles.

Population: 2500.

Rateable Values:

Capital £3,271,795; Unimproved £362,705.

System of Rating: Capital Value.

General Rates: 1.7453d.

Special Rates and Levies: Refuse £1 10s p.a. Water 5d and 2½d on annual value. Catchment Board .0508d. Harbour Board .1541d on Capital Value.

caters for the teenagers most days and nights of the week. Jaycees meet every second Monday night. Other known organisations are C.W.I., W.D.F.F., Plunket Mothers, Masonic & Oddfellows Lodges, St Johns Ambulance, Volunteer Fire Brigade (in a modern Fire Station, built 1962), Scouts and Girl Guides.

Recreation

Mataura is famous for the excellent trout fishing which is readily available in the Mataura River.

Winter sports are well covered to include Rugby, Soccer, ladies' and men's hockey, badminton, outdoor basketball, indoor basketball, indoor bowls and darts.

Summer sports include cricket, tennis, swimming, outdoor bowls and shooting at the Gun Club. It is proposed to form an athletic club next season.

There are four racing clubs situated within 30 miles of Mataura at Gore, Invercargill, Winton and Wyndham. Mataura, of course, is the original home of New Zealand's glamour pacer Cardigan Bay.

The Falls

In the earlier days, the Falls at Mataura were much larger than at present and the lamprey or kana kana found difficulty in ascending them. The Maoris from all over Southland trekked to the Falls where they collected these eel-like creatures which they considered a delicacy.

Tuturau Reserve

Two miles out of Mataura is the Tuturau Maori Reserve, scene of the last battle between the North and South Island Maoris in 1836. This scenic reserve is at present being developed and it is hoped to be a favourite picnic spot in the near future.

Reserve will soon be available as a camping ground.

Banking Facilities

There are three banks in Mataura — Bank of New Zealand, Southland Savings Bank and Post Office Savings Bank.

Services:

Mataura is well serviced for water and sewerage, a new water treatment plant having just been installed.

The building of a new maternity home was commenced last year.

A subdivision of approximately 130 sections has also been commenced.

Education

There is, at present, one primary school in Mataura and it is hoped that a forms I to VI High School will be started in the near future.

Amusements

One picture theatre in Mataura provides for the public while a Town Hall and two Lodge Halls are available for dances and social functions.

Stock car races are held some Sundays in summer just outside the south boundary of the town.

A drama society produces plays two or three times a year and a youth club



The main building at Forest Lodge was originally a wartime hostel. It provides accommodation for 20 guests. The bar section is seen on the left.

MATAURA DISTRICT LICENSING TRUST

THE Mataura Licensing Trust concluded 10 years of operations at the end of 1965. The first trust board was elected on December 10, 1955, and held its initial meeting on December 21. From small beginnings the trust has grown to be one of the biggest business organisations in rural Southland with an annual turnover in excess of £600,000 and employing a staff of nearly 100.

Today the trust occupies a sound position and has a bright future, but the way was not always easy. Over its formative years the trust was faced with many hurdles and experienced frustrations before its organisation was put on a sound business footing.

It is appropriate, therefore, that the history of the trust should be reviewed at the end of the first decade, and that the events associated with its formation should be recorded while they are still fresh in the minds of those who have been through this development period.

It is appropriate, too, that posterity, which will reap the benefit from this large community-owned business, should know the background and development of trust control of liquor — one of the

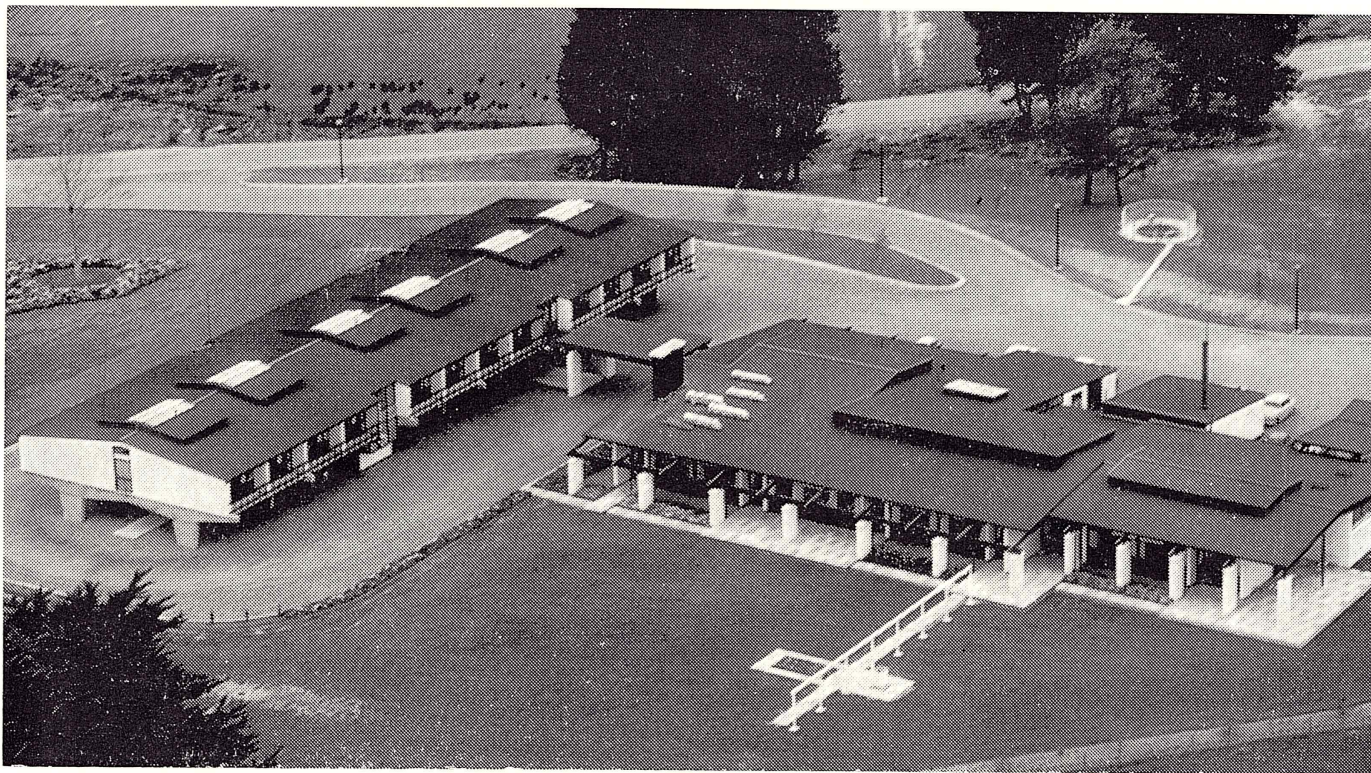
most important experiments in liquor licensing in New Zealand.

At the end of its first decade the Mataura Licensing Trust can look back with pride on its achievements. It would be the first to admit that there were trials and tribulations over the formative years, but all these are now history and the trust today is as soundly based as any in the country. It has almost completed its development programme and can look forward to a consolidation of its position over the next decade.

As the figures show the financial position of the trust is sound. Today the assets of the trust stand at approximately £500,000 and the loan indebtedness at about £250,000, so that in the first decade the trust has developed a community asset worth about a quarter of a million pounds. It is an achievement of which it can be justly proud.

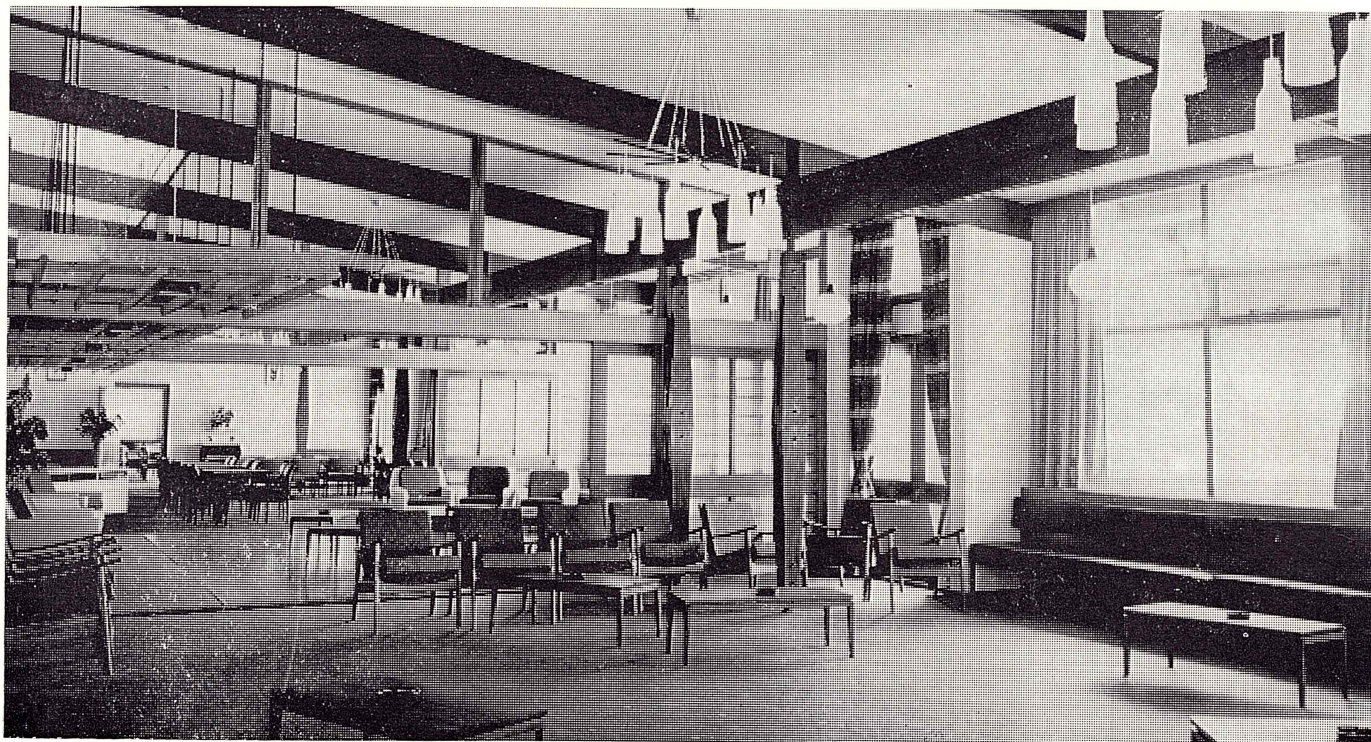
The trust has entered its second decade on a progressive note and can look forward to the future with confidence. It is planning for the future and has shown that it is conscious of its responsibility to provide at all times adequate accommodation and drinking facilities throughout its wide district.

Mataura District Licensing Trust

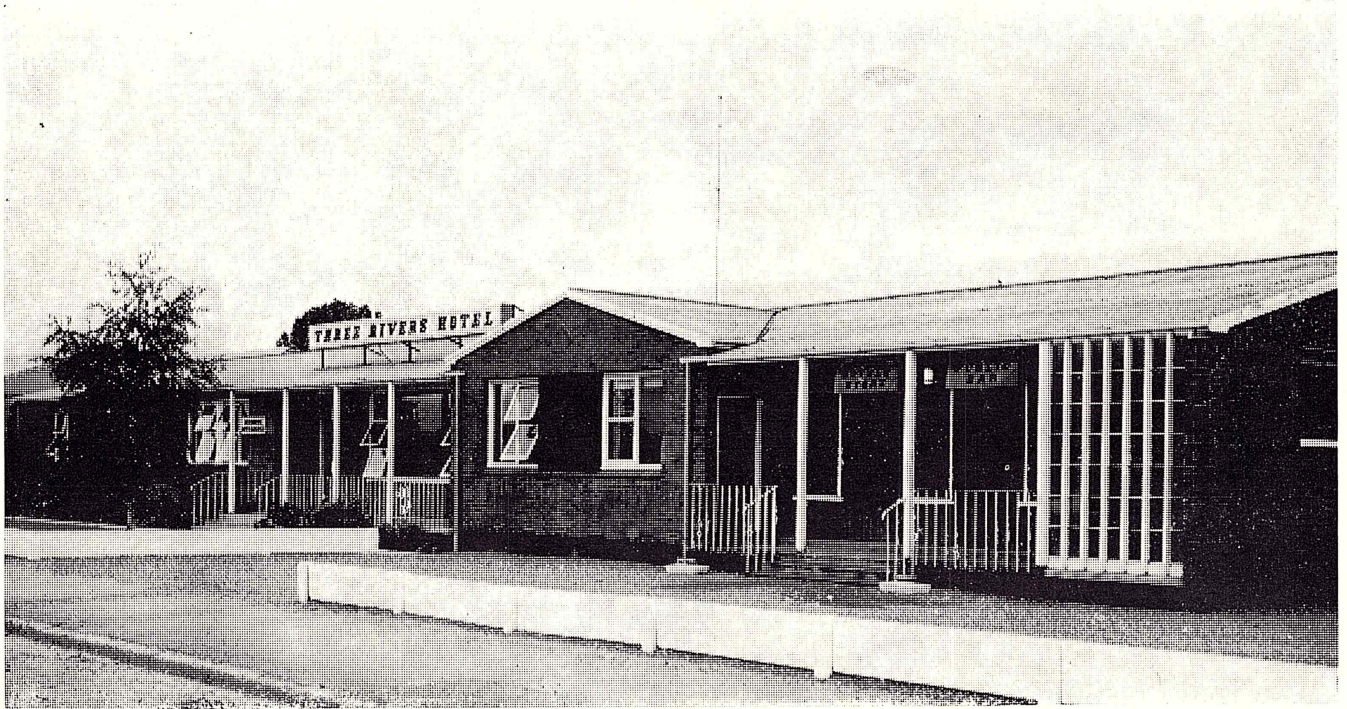


ABOVE: Aerial photograph of Croydon Lodge showing the accommodation block, under-cover parking, lounge, dining rooms and club bar.

BELOW: The lounge and dining rooms of Croydon Lodge, divided by means of sliding doors.



Mataura District Licensing Trust



ABOVE: The Three Rivers Hotel at Wyndham was so named because of the town's position at the meeting of the Mataura River and the Wyndham and Mimiha tributaries.

BELOW: The Falls Hotel at Mataura opened as a tavern on December 16, 1961.



WESTERN SOUTHLAND

Wallace County is Developing Fast

By R. F. WATSON

Chairman, Wallace County Council

I AM, at all times, pleased to associate my Council with any publication which seeks to publicise the province of Southland and in particular, the County of Wallace, which with Southland County Council administers the rural districts of the province.

In Wallace, our main pre-occupation is with farming, which has already achieved high production levels, but which also has a potential for further development probably greater than that of any other local body area in New Zealand.

But as well we have other substantial industries in sawmilling and coalmining, each of which makes a major contribution to the South Island requirements in these fields. Many minor industries also flourish, such as the expanding fishing

industry based on our south coast, the production of agricultural lime, serpentine, cement, and ceramic clays.

Also within Wallace County is Te Anau and Manapouri, the bases for tourism embracing the huge Fiordland National Park, with the southern lakes, Milford Sound and a host of other attractions. This is a fast expanding industry capable of making a major contribution to our overseas funds, and we are pleased to be able to make a major contribution in this regard.

Wallace County is developing fast and will continue to do so, and thus offers many opportunities to industry. My Council is determined to aid this development in all ways possible and offers both in formation and support to those interested in the area.

MAIN INDUSTRIES MEAT AND WOOL

Wallace County is predominantly a sheep farming area, with beef cattle showing a marked tendency to increase over recent years. Dairying and pig raising still retain a firm hold in the coastal and central regions.

Wheat and oats are grown extensively, with extremely high per acre yields, small seeds are harvested in the central and northern areas, while Tuatapere boasts an extensive potato yield.

The total sheep population of Wallace County has grown from just over one million in 1956 to just short of two million in 1966, an indication of the potential of the County, which still has scope for much greater development. The projected sheep population

for 1968 is 2½ million and for 1973 2.9 million.

Beef cattle, which totalled 23,400 in 1958 has already reached more than 45,000 in 1966 and the projected figure for 1968 is 55,000 and for 1973 79,500.

The potential for development, both of private and Crown lands is probably greater than in any other county in New Zealand. The Lands & Survey Department are in the process of successfully developing more than 280,000 acres of pastoral land into small high yielding units. Already several of such units have been settled while it is estimated that a further 280 units will become available, mostly fully developed, in the years immediately ahead.

COUNTY STATISTICS

Wallace County has an area of 3728 square miles, an estimated population of 12,000, a capital rateable value of £29,036,770, and the unimproved rateable value is £7,908,980.

Rating is on the Capital Value except in Te Anau County Town where the Unimproved Value applies.

Over-all general rate is 1.2 pence in the £ on the capital value, while Southland Harbour Rate is 0.16 pence in the £ and Southland Catchment Board Rate is 0.053 pence in the £.

The present mileage of roads within Wallace is 1062 miles, which figure is increasing at the rate of approximately 20 miles per annum. Of the above total 333 miles is sealed and additional sealing per annum is of the nature of 30 miles on County roads and State Highways within the County.

Following a vigorous bridge renewal programme, bridging is generally of a high standard.

All major routes within Wallace County have been classified as Class I roads and all other roads are Class II roads.

Climate

Although the rainfall in Fiordland is heavy, the southern coastal belt averages 43 inches per annum spread over 100/150 days, while in the central and northern districts, the average rainfall is 36 inches, spread over 150/200 days.

While frosts are frequent over most of the district during winter, the climate can generally be described as temperate.

Flooding is rare while earthquakes are almost unknown.

Topographical

The County generally comprises a series of river plains, rising fairly sharply into foothill country, which in the north and west is dominated by range country rising to 6500 feet.

Soils

The soils of the plains are generally alluvial deposits and recent soils. On the easy rolling country the soil type is generally yellow brown earth, with yellow grey earth on steeper lands and hills.

The plains and lower foothills are generally cultivatable and capable of high production, subject, of course, to adequate land drainage and the application of lime and fertiliser.

Potential

The potential for primary industry is unlimited, the conditions for secondary industry are attractive, with adequate land available, unlimited power, water, and first-class roading and transport facilities. The Local Body is always willing to co-operate with enquirers in this regard.

Coalmining

Another major industry is the mining of sub-bituminous type coal in the Ohai field, which extends over 35 square miles.

Annual production from both underground and opencast mines exceeds 325,000 tons per annum, while reserves of coal are estimated to be in the vicinity of 16 million tons.

Sea Fishing

Commercial fishing from the south coasts bays and principally from River-ton is an expanding industry. Working Foveaux Strait and the West Coast Sounds areas, these boats handle both wet fish and crayfish.

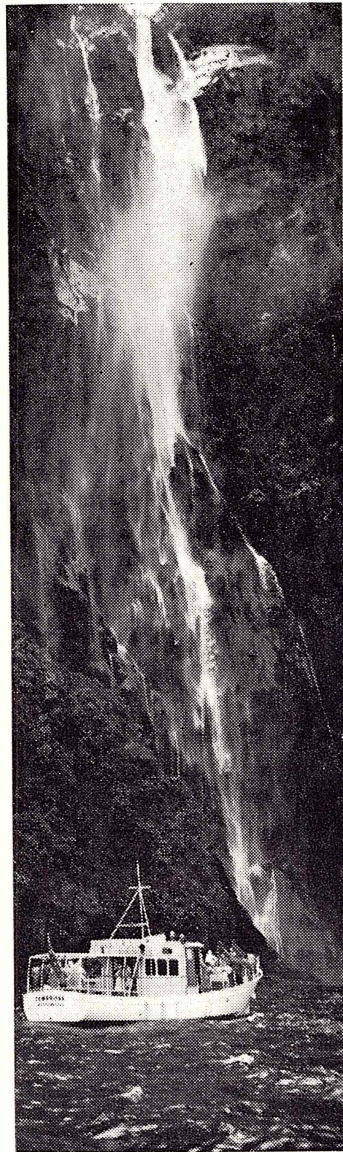
Tourism

Wallace County has much to offer the tourist and of recent years tourism has become an increasingly important factor in the district's economy.

Te Anau, the main tourist centre, reflects the increase in its population, which has risen from just short of 100 in 1956, to just short of 1000 in 1966. During the holiday season this figure rises to the vicinity of 5000 and is increasing annually.

Fiordland, highlighted by Lakes Te Anau and Manapouri and their many attractions, by the lake studded Eglington Valley Road, which ultimately leads to Milford Sound, and offers magic vistas of uncomparable scenery, boating, tramping, shooting, including the famous Wapiti, fishing, and mountaineering, as well as easy going holiday trips in comfortable and attractive surroundings.

As well, the forests, lakes, and rivers of this wide spread county offer fishing and shooting and holiday facilities, while the south coast beaches, and particularly Riverton Rocks, are most attractive and safe for bathing.



The Sutherland Falls at Milford Sound.

Sawmilling

This district contains substantial areas of State Forest and bush clad Maori lands and as a result sawmilling is a major industry, producing 15.5 million board feet of sawn timber annually from 25 sawmills, the majority of which are in the Tuatapere district.

Under the present conservation policy of the State Forest Service, the indigenous forests will never be denuded of millable timber.

The planting of exotic forests has risen to 450 acres per annum and the total present planted area exceeds 5000 acres.

Other Industries

Other industries include the production of agricultural lime, cement, clay for manufacture of ceramics, serpentine for use in fertilisers, game meats and the like.

At present, much interest is centred on the huge Manapouri Power Project which aims to provide power for industry at very economic rates.

As well as the present generating station at Monowai, the potential of the rivers and lakes of this area for power production is considerable.

Ohai is a pleasant mining town, with high pressure water supply, sewerage, all streets sealed and the like. Primary education is available in the town, while transport is provided for secondary pupils to the High School at Nightcaps, less than five miles distant.

Tuatapere, on the Waiau River and close to the south Coast, once enclosed in native bush, is now surrounded by open farm lands, but still serves many sawmills cutting in the bush areas some miles beyond the town. A pleasant bush clad scenic reserve surrounds the town domain on three sides, while the Waiau River sets off the remaining boundary. Both primary and secondary education is available in this town.

Te Anau is a fast expanding town servicing the tourist industry and the large scale land development programme being undertaken by Lands & Survey Department in this locality. Plans for its future provide for a well laid out business area, ample public gardens, parks, domains, accommodation at all levels from luxury class to average, camping facilities and public services.

The Te Anau Golf Links, with an unsurpassed view of the lake is aimed at becoming a major attraction in itself.

Primary schooling is available in the town with secondary education based on Manapouri Hydro Village meantime, but scheduled to be sited in Te Anau in the near future.

A water supply scheme to serve the full town and a sewerage scheme for the business area are in hand.

At all of these places and elsewhere in Wallace, adequate land and facilities for industry, large or small, exist, and the Council will willingly co-operate in respect to any enquiries received in this regard.

OTAUTAU . . .

Heart of Western Southland

OTAUTAU, today the centre of one of the finest farming districts in Southland, is actually a product of the Wakatipu gold rush. It lay on the direct route from Riverton and other parts of Southland to the lake diggings and travellers found it a convenient stopping place. As a township it had no real beginning — it just grew steadily to meet the demands of the changing times.

Miners Became Settlers

For a long time it was no more than a stopping place and there was no settlement there of any consequence until the seventies. It gradually fell into the new economic pattern following the decline of whaling, when the former whalers began to look for land and saw in this region some magnificent alluvial flats that required no clearing and carried plenty of feed.

Later gold was found in the neighbourhood and this resulted in a sudden increase in the population of the district. Wherever gold was found, there the population grew and when the mining failed many of the miners stayed on to farm the land they had torn up with such fruitless zeal.

Change to Sheep

At one time much of Otautau's prosperity was due to the fact that it was the centre for as many as five sawmills and timber from the eastern side of the Longwoods came into the mills in a constant flow, while all the fibre from the Pukemaori flaxmills also came into Otautau for raiing. But the biggest and most permanent factor in the prosperity

of Otautau lies in the fact that it is the centre of the huge annual sheep movements from the outlying stations in the autumn.

Stock Sales

These February and March sales rank among the biggest in the South Island and buyers and sellers come from far and near. Sheep have even been sent from Canterbury and sold on the Otautau stock market. The saleyards, which were opened in 1897, handle from 85,000 to 90,000 sheep a year, with the biggest sales in the fall, and there have been yardings of up to 25,000 sheep at a time. From the last sale in February to the first sale in April — a period of about six weeks — about 70,000 sheep are put through the yards.

The quality of the stock has been maintained largely through the efforts of the Wallace A. and P. Association which holds an annual show noted for its Downs and Romneys which are claimed to provide one of the best displays in the South Island.

Administrative Centre

Otautau is the administrative centre of the Wallace County, one of the two counties on the mainland of Southland, comprising an area of 3727 square miles, which makes it the third largest county in area in New Zealand. The originally surveyed township of Otautau was on the eastern side of the Aparima River, near the present cemetery, but the fact that the wagoners preferred the present site, on the bank of the Otautau stream, resulted in the township growing there instead.

The first building was a wagoner's shack built by James Quin, who came from Ireland, and his house stood next to where the National Bank now stands. Its early days were uneventful and no doubt the residents preferred to have it that way. Their land was good, their crops and stock flourished, and they prospered correspondingly in the knowledge that they were in the heart of one of the choicest agricultural districts in Southland.

Sport and Recreation

Apart from its commercial and farming activities, Otautau is noted for one other prominent feature — its magnificent Holt Park, named after the pioneer settler. For many years the park was known as the Recreation Ground and the name was corrupted to "The Rec," but when Holt died he left a sum of money to be spent on permanent improvements to the ground, and in 1938 the name was changed to Holt Park.

The Labour Day sports meetings there are the greatest event of the year and since 1925, the year of the first meeting, New Zealand and even world champion athletes and axemen have competed there and helped to make the park famous. It lies beneath a lofty natural terrace on the western side and this terrace has been beautified with trees and equipped with seats which blend in the landscape, giving a grandstand view to thousands of spectators who come from all over the province to see the events.

Flourishing Centre

Otautau still remains a flourishing business and shopping centre for a thriving rural community. Much of the land in the vicinity of the township, especially on the east side of the Aparima River, is sown down in wheat and the yield is well above the average, even for Southland where the yield is normally high. In fact, the record of 112 bushels to the acre has been harvested in the Bayswater district.

Another big development in the town is the Port Craig Company's huge sawmill which is nearing completion and which will cover five acres and give employment to a considerable number of men. The timber will come in the main from the beech forests of the Longwoods. There are as well a joinery factory and a fertiliser mixing plant that serves the whole of Western Southland.

Local Organisations

In all there are, according to an analysis prepared by the local Jaycees, 99 different organisations serving the district and among them they have set a civic tone of an exceptionally high standard. They are prepared to work together in any local enterprise and the result is that a fine sense of comradeship is developed through a common interest shared by all.

New homes of modern design form part of the pattern of development and the hilly nature of the borough permits a fine panoramic view for many of the residents. Altogether it is one of the pleasant places in which to live from the point of view of climate — being well inland it escapes much of the coastal rains — outlook and community life.

Social Services

As a community Otautau is well equipped to cope with the demands of social life and local organisations. There are two public halls large enough to meet all local requirements, a nine-hole golf course, a modern swimming bath, tennis and badminton courts, lawn and indoor bowls and a public library. In addition there are two excellent primary schools — one public and one convent, a maternity hospital and three hotels. The district is served as well by an automatic telephone exchange.

In many ways Otautau is unique. Where else in New Zealand is there to be seen such an amazing combination of beauty and production — green

fields, snow-white, placid sheep, stretches of incredibly good fishing river, forest clad hills in the distance, the snow-clad Princess Range and the legendary Takitimu. And through all this runs the smooth, sealed State highway.

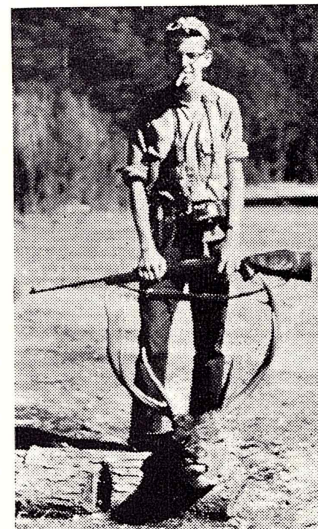
Virile Township

At first sight Otautau is just another country town. But look a little closer and you will find it a country town with a difference — a community enthusiasm that must be unexcelled, if not unequalled, in any other part of New Zealand. Its governing body is the Otautau Town Council, the chairman of which is Mr J. W. Wesney, son of the late W. J. Wesney, who was a well-known personality throughout New Zealand and even further afield by reason of his founding a remarkable importing business which has been built up over the years.

Like most Southland towns, Otautau is mainly a servicing centre for the wealthy farming district that surrounds it, and because of the growing demands of a prosperous rural community the town itself is growing. It is one of those processes that have a doubling-up effect and through this there are those who predict a great future for Otautau.

Ideal Climate

It has one of the best climates in Southland, for it is protected from the southerlies to which Invercargill is so exposed by the Longwood ranges. The rainfall over the past six years averaged 41.54 inches per year and the sunshine hours for 1965 totalled 1501.



Deer hunting in Fiordland.

Otautau has been called the "Heart of Western Southland" and this is in fact what it is. It is only 32 miles from Invercargill, 16 miles from one of Southland's most popular beaches, Riverton Rocks, 19 miles from the vast coalfields of Ohai and 22 miles from the timber-covered district of Tuatapere, the last outpost of civilisation and on the edge of one of New Zealand's finest districts for the lovers of outdoor sport — hunting, fishing, climbing and exploring.

With its ample hotel accommodation and also its camping facilities at Holt Park, Otautau is a convenient base for all sportsmen, whether they are after the toheroas of Te Wae Wae Bay, deer or pig in the Takitimu, or the wily trout of the Aparima, Oreti or Mararoa rivers.



One of the modern tourist launches on lake Manapouri, probably the most beautiful lake in New Zealand.

—Hazelidine Photo

Port Craig Timber Co. Ltd.

Cnr. TWEED and MERSEY STREETS

INVERCARGILL

Phone 82-194

Managing Director:
H. S. J. Craig

Sales Manager:
G. A. Boyce

Timber:
W. H. Conway

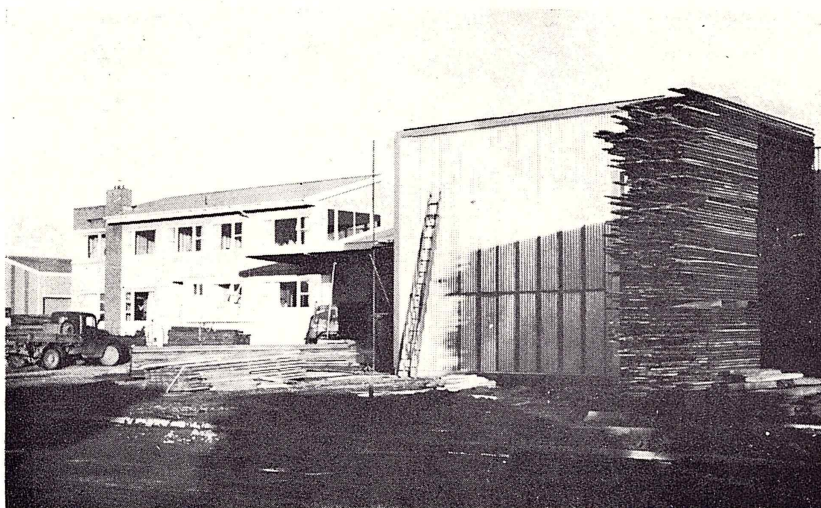
General Manager:
J. P. Lockie

Joinery:
D. G. Cull



ABOVE: Imposing frontage to the Port Craig Timber Co. This building houses a woodwork and joinery factory and the offices of the company.

BELOW: A view of the Port Craig offices and factory from the timber yards where the large building in the foreground is being extended. This is a drying plant of novel design.



FOR thousands of Southlanders the Port Craig Timber Company stands not only for an up-to-date and go-ahead timber firm but also for its link with the history of Southland's more remote hinterland. In fact the company must be one of the rare ones that has given its name to a locality.

In 1966, however, the Port Craig operation is a big one. It has five mills throughout the province producing more than five million feet of timber a year. At the Mersey Street headquarters this wood is sold or processed into items like joinery for schools, shops and houses. The building trade is also catered for.

At Mersey Street the company has one of the most up-to-date joinery factories in the country. Use is made of compressed air to power the units.

A five-acre timber yard is well equipped with mechanical stackers and other aids for more efficient handling of the millions of feet of timber that arrive throughout the year. Port Craig Timber Company was one of the first to recognise the benefits that could be obtained from stackers and imported them directly from overseas.

A high proportion of the timber coming in is of native species — Southland beech and rimu mostly — and most of it is used in Southland. Some smaller quantities of Southland beech are sent north.

Two of the company's mills are located at Southland's sawmilling "capital" at Tuatapere and the other three are at Otautau (Western Southland), Tokanui and Slope Down (southern area).

Looking ahead, the company is building one of the most up-to-date mills in the South Island, at Otautau, and this should be operational by the end of 1966. It will incorporate some of the latest ideas from overseas as regards production flow and management as well as some of the latest overseas mechanical equipment.

In recent years the company has also moved into the pinus radiata field and plans to establish another mill within a few years.

The present manager, Mr H. S. J. Craig, said that because of the dwindling stands of rimu this wood would be worked out within 30 years. While not as much wood was now being used in house construction, the costs of timber getting have risen with the enforced cutting of timber in mountainous and more remote areas.

Although there is an abundance of mechanical aids and production per man is high, the company is a sizeable employer with 180 workers employed. More than 100 of these are men working in the mills.

While there are few women in that larger total, one is of particular interest. She is Mrs D. Frame, who represents the third generation of Craigs in the firm. Mrs Frame works in the head office in the city.

A feature of the office building, which also houses a woodworking plant and fronts the timber yard, are the murals done in coloured mosaic and flanking the main entrance. Naturally these depict aspects of the timber trade and must be unique in the country.

Originally the Port Craig Timber Company was an offshoot of the Marlborough Timber Company and operated in the remote Southland hinterland on Foveaux Strait. Steamers brought the logs direct from the mill to the Invercargill Estuary (not then silted up) where

it was unloaded at the old wharf. Horse and dray were the common means of conveyance then. Of course modern transporters do the same job with far less effort.

Many older Southlanders can remember the comings and goings of the steamers plying their way from the remote mill to the estuary. Their names were the Baden Powell, the Kotare and the Kekenno. The former two were capable of carrying 50,000ft of timber but the Kekenno was smaller. These steamers also provided a link with the settlers in those more remote areas.

Even within the province the origin of the name Port Craig for the location is little known. But the facts are these:

When the Port Craig Timber Company began operations as an offshoot of the Marlborough Timber Company in the Mussel Beach area (at the southern tip of Fiordland), the name was changed to Port Craig in memory of Mr John Craig, father of the present managing director, who was drowned in

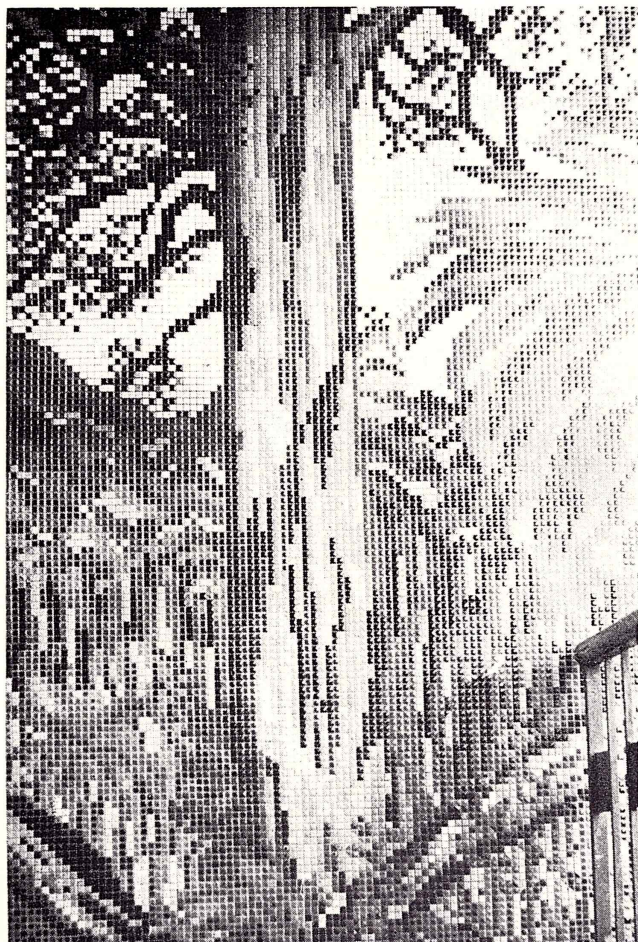
Te Wae Wae Bay during the development stage of the Marlborough Timber Company's big mill. Work had been going on there since 1918 but the Port Craig Timber Company was established in Invercargill in 1923.

A thriving settlement grew in the bush-hemmed mill area and a school was built to cater for the large families. Timber was exported direct to Australia as well as to Invercargill. But, like so many other businesses, this trade was badly hit by the slump in the thirties.

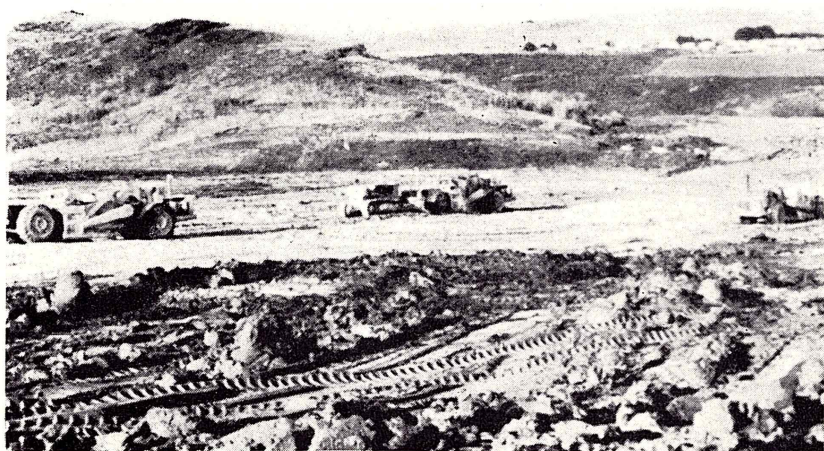
The Australian market dried up as they too were severely affected by the depression, orders fell away and the mill had to be closed.

Since then the company has recovered and has played a major role in the provision of wood for Southland's building boom.

Since the war, diversification, new methods of handling wood in quantity, efficient management and sound planning has kept the company at the forefront of the industry.



A feature of the Port Craig building are the murals flanking the main entrance. These mosaics in coloured stone depict aspects of bush milling and provide a novel feature in the building.



Euclids and crawlers working on the hilltop in the open cast field at Ohai. In the centre, the crawlers can be seen giving the Euclid an extra boost.

SOUTHLAND'S RICHES UNDERGROUND

Black Gold of Ohai

SOUTHLAND is one of the richest provinces in New Zealand both above and below ground. Although it is not commonly known, Southland has the largest coalfield in New Zealand. This is the lignite-producing field in the Maitara Valley, stretching from Gore to the coast.

The field has a measured output of 5,400,000 tons, although it is believed that the capacity could be considerably more.

The three underground mines — Morley, Waoraki and Linton — and the opencast mines at Ohai produce about 300,000 tons of coal annually.

Opencast operations are carried out by the Ministry of Works for the State Mines Department in accordance with the carefully planned development programme adopted by the latter department.

A number of workings have been opened during the last few years, but operations are concentrated in two localities, No. 3 and No. 6 opencast mines.

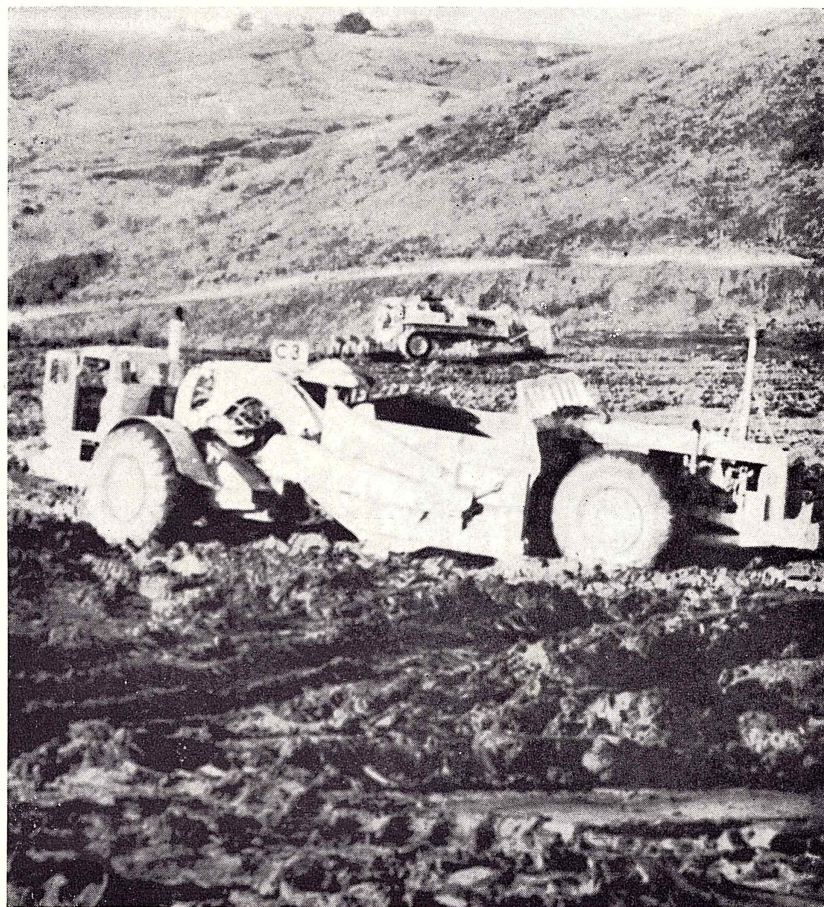
Opencast mining at Ohai consists basically of two operations, removing the overburden to expose the coal seam which may entail anything up to 300ft depth of excavation, and the digging and removing of the coal itself.

Operations in No. 3 opencast mine, because of the problems arising there, are carried out by the departmental forces of the Ministry of Works.

In No. 6 mine overburden stripping is carried out by the Ministry of Works contractors. This mine is programmed for development in three blocks.

Blocks I and II have already been stripped, but Block III, the object of a £712,500 contract, involves the stripping of 6,000,000 cubic yards of overburden to provide for coal being taken out in 1967.

Stage two of this development involves the removal of a further 3,000,000 cubic yards of overburden to uncover the main lower coal seam which is about 70 feet thick and contains 1,000,000 tons of coal. Stage two will closely follow the completion of stage one.



A closeup of a Euclid working on rough ground on the hilltop. The machines are capable of good speeds even with a full load.

N.Z.'s Biggest Single Earthmoving Contract

Dick Collis
Moving a Hill
in £712,500 job

A SOUTHLAND contractor, Mr Dick Collis of Gore, is now undertaking the biggest job of his career and the biggest single earthmoving contract in New Zealand. His job is to shift a hill as big as any on Southland's rolling plains to give access to 1 million tons of coal — a task which will in all take him four and a half years to complete.

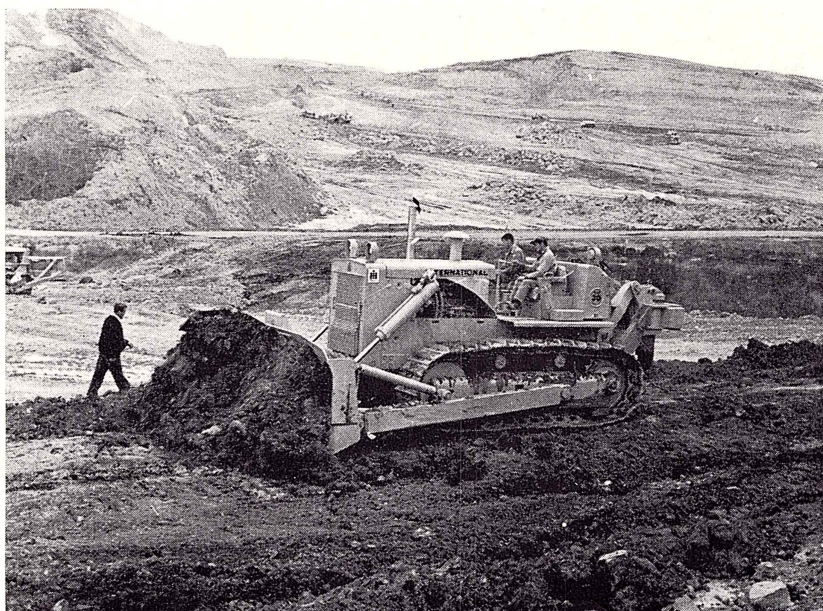
The hill is at Ohai in the heart of Southland's coal producing area and it is estimated that more than six million cubic yards of overburden will have to be shifted to expose the seam of coal.

Dick Collis, head of L. D. Collis Ltd, began the task in May, 1963, and now many thousands of cubic yards of overburden have been moved by his machines and been dumped in surrounding valleys. The opencast field at Ohai is divided into three blocks, and Mr Collis working on Block 3 which will cost £712,500 to clear of overburden to allow access to the coal. Other contractors are working on Block 2.

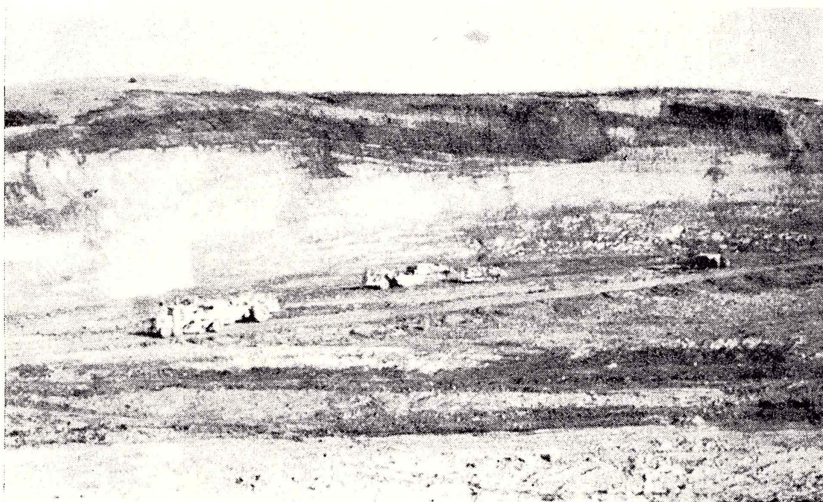
Mr Collis now has the largest fleet of Euclid scrapers in the Dominion. He began contracting in Foverton in 1948 with his first machine, a dragline, but today his fleet includes 8 Euclid TS24 motor scrapers, huge 32 cubic yard 560 hp models weighing 80 tons with the maximum 40 ton load; and three Euclid TC12 crawler tractors which, like the scrapers, are the largest of their kind in the Dominion. His equipment is priced at £400,000.

The machines scoop up 32 cubic yards of overburden with each haul, and lose little time by unloading as their huge balloon tyres allow them to travel at high speeds over rough ground. The Euclid crawlers and the D8 and D9 also used on the project have proved invaluable in the sticky mud conditions at Ohai.

With the efficiency shown by these machines Mr Collis is confident that his huge task will be completed by the set date of 1967.



Father and son work in partnership on this major undertaking.

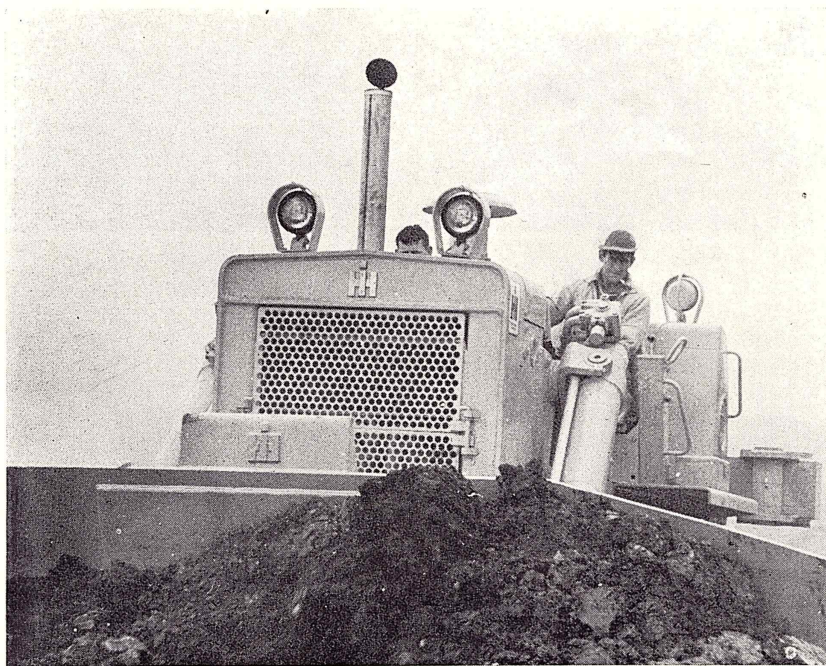


The hill shown in the background will take contractor Dick Collis and his fleet of Euclids four and a half years to shift. It is predicted that one million tons of coal is concealed under the hill.

The Men Who Move Mountains



L. D. Collis & Co. Ltd, earthmoving contractors,
are at present engaged on the largest single
earthmoving contract ever awarded in N.Z.



Dick's son Doug, on the job with his father.



The man who has the £712,500 contract for
shifting the hill — Dick Collis, of Ohai.

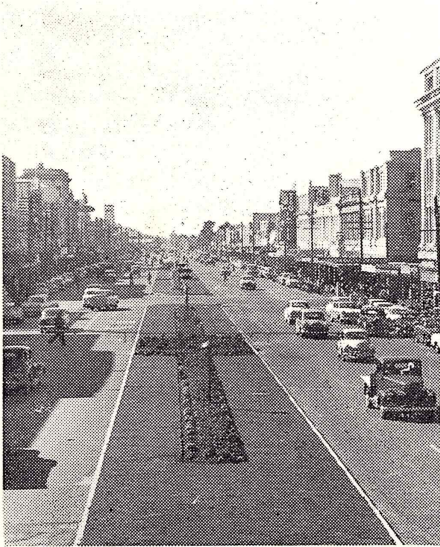
L. D. COLLIS & CO. LTD.

P.O. BOX 531 INVERCARGILL

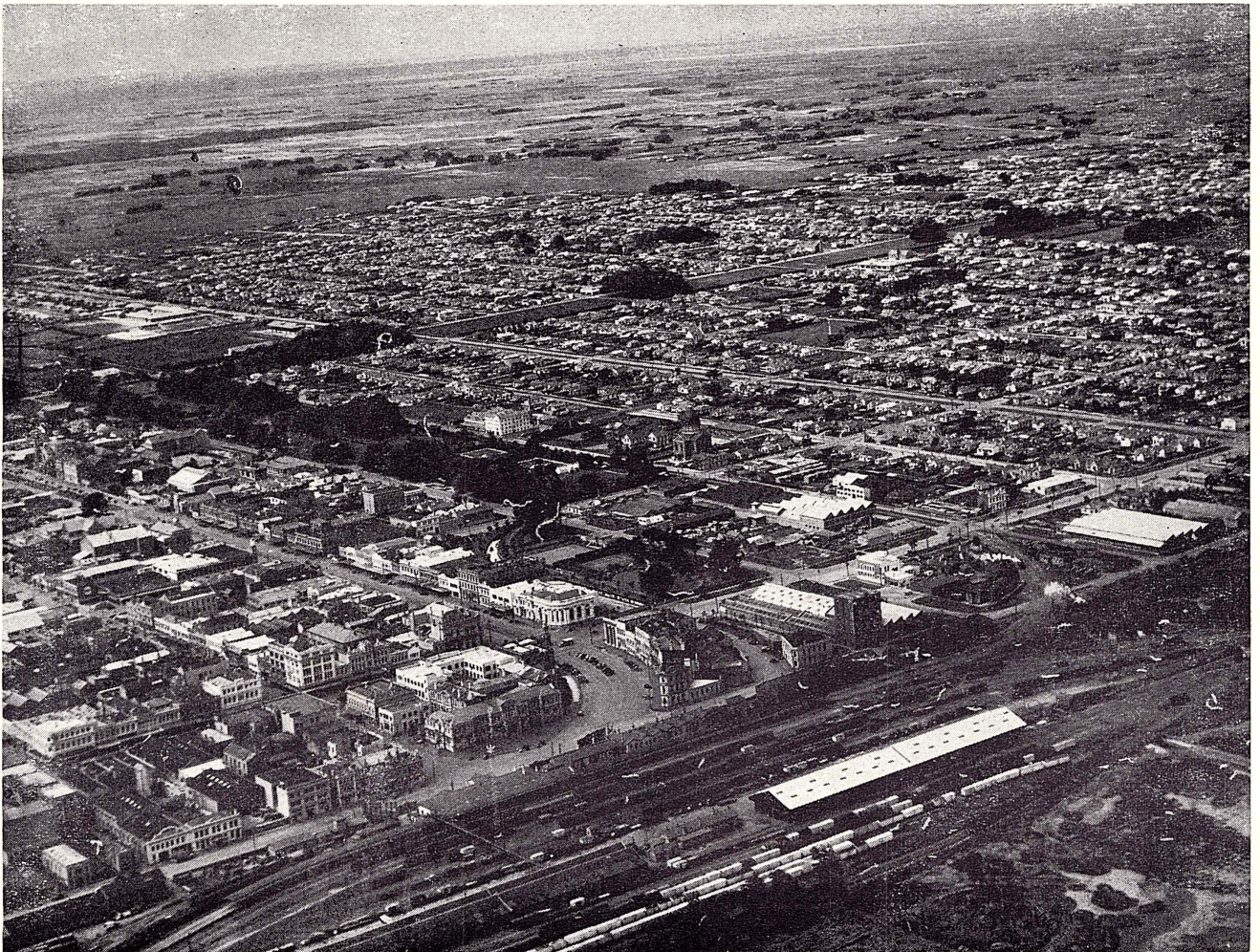
PHONE 5231, GORE

INVERCARGILL

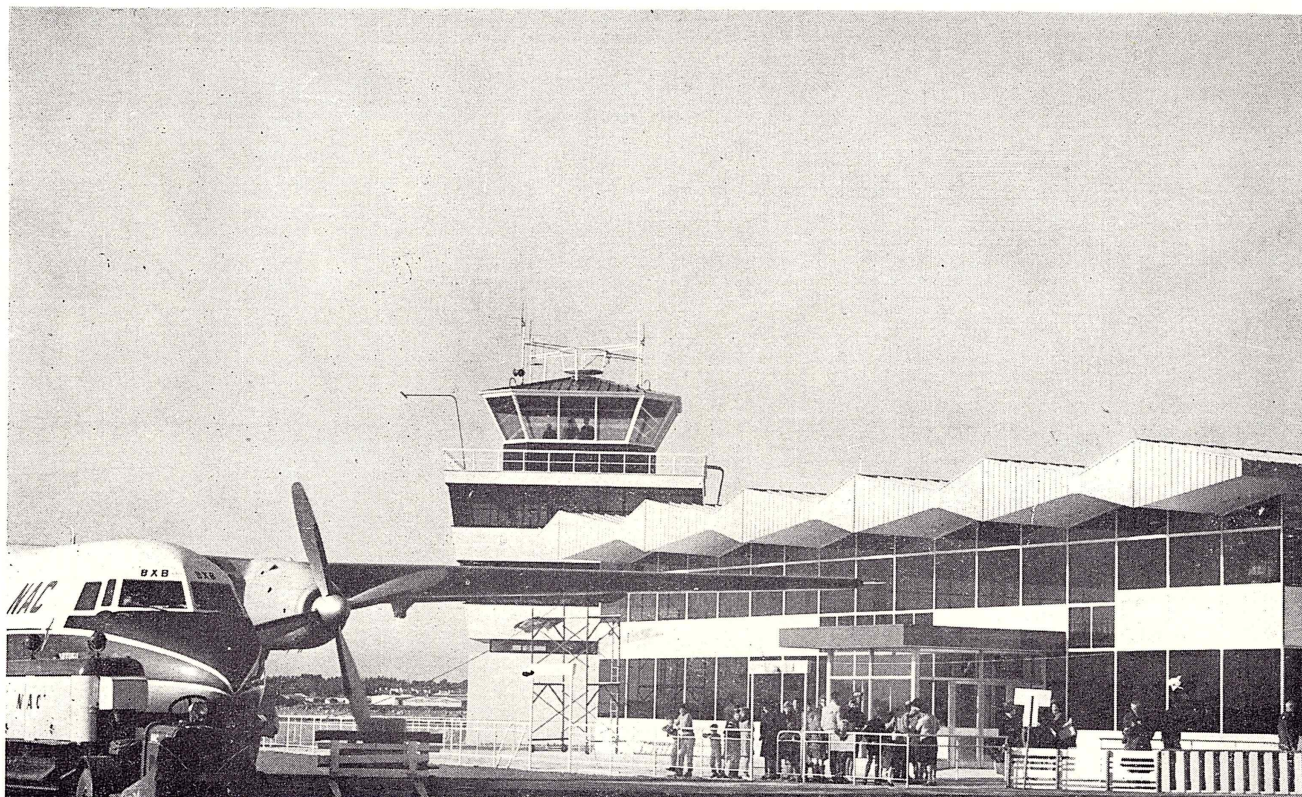
Capital of Southland



Dee Street, Invercargill. —Hazeldine Photo



Aerial view of Invercargill.



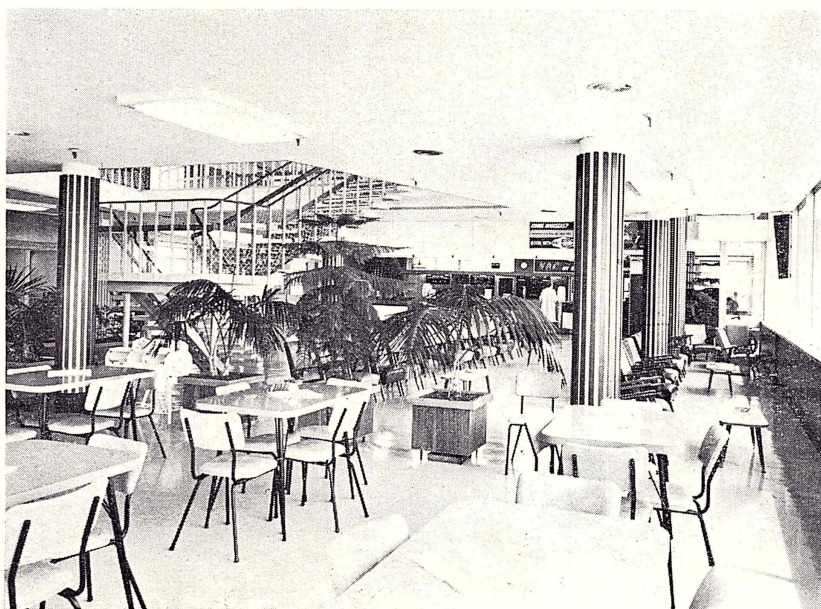
Invercargill Airport, gateway to Southland for thousands of tourists annually.

—Hazeldine Photo

AIR SERVICES

National Airways Corporation have their southern terminus of trunk services at Invercargill, where three or four inward and outward flights operate daily, with restricted services on Sundays. Invercargill Airport is also the headquarters of N.Z. Tourist Air Travel which operates scheduled flights to Stewart Island and other areas by two amphibian aircraft.

A local air service, Southland Air Taxis, operates charter services with light aircraft, and several aerial top-dressing companies are also based at Invercargill Airport, which is only about 1½ miles from the centre of the city. Both freight and passenger services are well-organised and efficient.



ABOVE: Interior, Invercargill Airport.

—Hazeldine Photo



LEFT: Light tourist aircraft have also brought many of the high ski grounds within an hour or two of Invercargill.

CITY OF THE PLAINS

NEAT and businesslike Invercargill, service centre for Southland, today stretches across more than 10,000 acres, a model city, a true City of the Plains.

It could hardly be a finer compliment to the patriarch of the Otago "Pilgrim Fathers" whose name it perpetuates. It is home to more than half Southland's population. It reflects a thoroughly sound and pleasant way of life. It is at once orderly, bold and fresh.

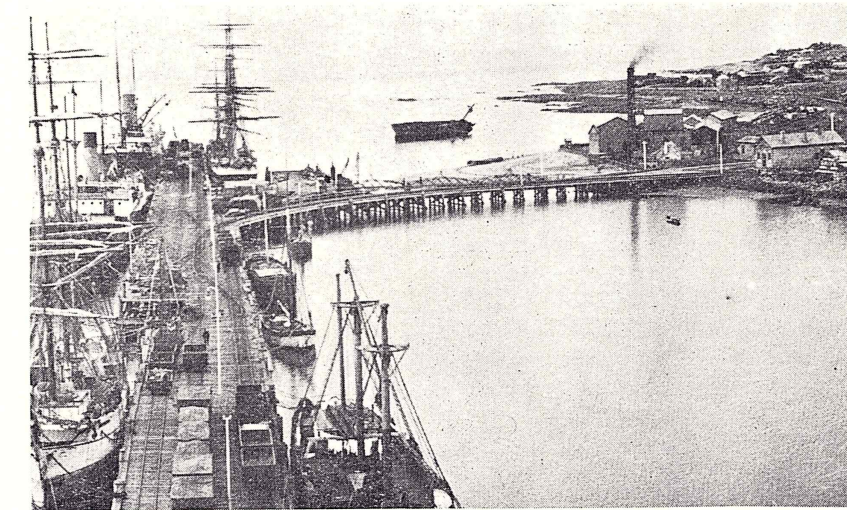
Local government is extremely forward-looking.

Business on all fronts is equally go-ahead.

Facilities from recreation to commerce are impressive.

First and foremost, it is a farming centre, but with few rough edges, and much that has come about since the days of bush and mud flats is a result of far-sighted planning on paper from the outset. When more than half the town site was still covered in fine timber, a long-range plan was prepared, giving 80-odd rectangular blocks, wide streets, green belt and more, and the earliest ambitions and principles are permanent.

The result is a city with an urban population exceeding 46,000, showing a



The port of Bluff as it was about 60 years ago.

—Hazeldine Photo

growth rate of about 32 per cent. In 10 years — and population rises are a good indication of development. Indeed, it could be claimed, on figures for Invercargill city, that population there has leapt 50 per cent in 10 years. The disparity between city and urban figures arises from large areas added over the years and shown in the urban tallies, which have led the South Island's fairly

consistently. At the current rate, Invercargill population should exceed 60,000 by 1976. It may be much greater.

For the present, anyway, the city population serves the farmer, directly or indirectly. City people see themselves as Southlanders, part of the larger scheme of things, rather than Invercargillians. The city is the transport, commercial and administration centre, and nearly every aspect is influenced by the activity on the fields beyond the boundary. It is a fact of southern life recognised by factory hand or bank clerk or mechanic.

More than 60 per cent of the Invercargill working force is devoted to service industries — and commerce and finance absorb nearly half of that. Yet Invercargill is a significant contributor to the national income in, for instance, factory production. There are about 365 factories, employing around 6000 people, using materials worth more than \$44 million having an output valued at just on \$70 million.

Manufactures range from foodstuffs to heavy engineering plant, and they are known afar, often beyond New Zealand, and prospects for industrial expansion are rosy. All occupational groups are well-served in turn by local bodies, organisations and Government departments. The services of the Invercargill City Council departments and the Invercargill Licensing Trust are eyed throughout New Zealand.



Pony classes draw a big entry. The start of a Pony Trot at the Invercargill Show.

—Hazeldine Photo

Self-Contained Unit

The City Council controls a self-contained urban unit able to handle, within present boundaries, most of the commercial and industrial development in prospect until the early 1980s. The city has a capital value approaching \$116 million, there are nearly 13,000 rateable properties and the public debt in 1966 stood about \$5,306,000 — an indication of capacity to pay and a desire for what is best. Roothing is an instant symbol of progress and Invercargill's ranks high. Little more than a quarter of the city's 113 miles of roads are unsealed, and they are on lists.

Municipal Transport

It has been recorded that Invercargill's municipal bus services carry more passengers a mile than municipal services elsewhere, with New Zealand's lowest municipal bus fares and New Zealand's third-greatest mileage.

About one in every three citizens has a car.

Low Rates

Rates are about the seventh-lowest of the 15 cities outside the four main centres in terms of levies as a percentage of the total rateable unimproved valuation.

A recent northern survey put Invercargill residential section price averages as the second-lowest among 15 centres, including the main cities. Industrial land price averages were likewise favourable on comparison with northern figures.

Progressive Outlook

Big jobs are in hand on every side in the council's constant effort on behalf of progress.

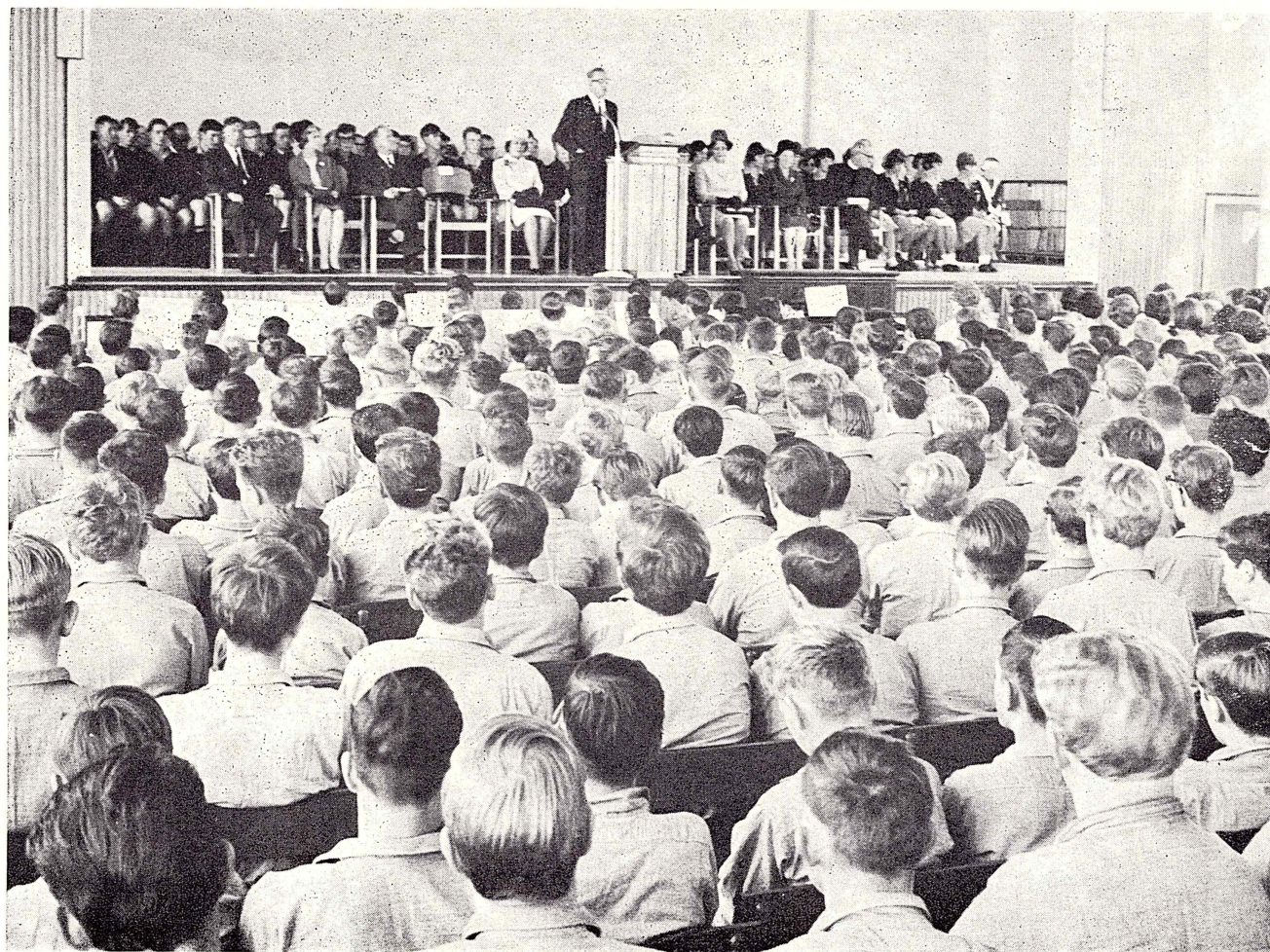
The visitor flying in catches the first glimpse of a big undertaking on the Waihopai Estuary at the south-west corner of the city where spectacular progress has been made with reclaiming land for in-

dustrial. Two blocks, one of 30 acres, the other of 20 acres, have been reclaimed for some time and the land, handy to all services, is being taken up gradually.

A further 35 to 40 acres are being created, and the council's investment is expected to pay handsomely in the long-run, for the council, the industrialists and thus the community. The time when the reclamation account breaks even is not far off.

Shopping Centre

Town planning anywhere has not been better exemplified than in the council-planned shopping centre for a new suburb. The plan for Glengarry was among the first of the type begun by a New Zealand local body. It embodies all the modern principles of suburban shopping centres as they are now being built abroad, provides safe and convenient shopping — largely from internal



Opening of new assembly hall at Southland Technical College 1966.

—Hazeldine Photo



Invercargill Museum and Art Gallery.

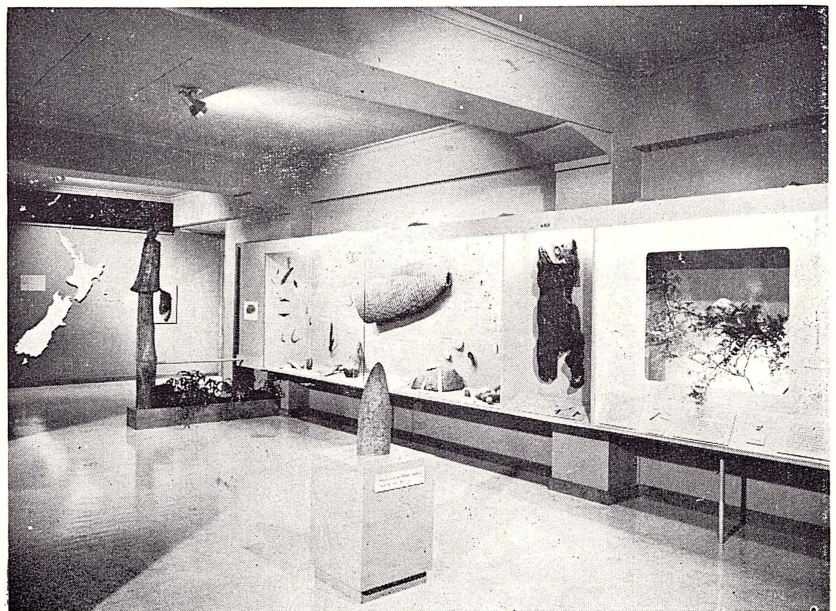
—Hazeldine Photo

pedestrian courts — and has ample parking.

The council bought a whole block. The perimeter was cut into residential sites, each set back from the street boundary and fronted by a reserve strip into which angle parking bays are recessed. Other sites were given over to churches, car park, public conveniences, shopping blocks, tavern, pedestrian walks and the like. Two multi-unit shop blocks have been built to council specifications and shops sold.

The pilot centre is placed strategically near the centre of the part of the city where population density is greatest. The customer potential within a radius of three-quarters of a mile is about 8000 people. But the centre is designed to attract also eastern district farmers and large numbers of shoppers from all over the city. It is doing so.

For the west side of the city, the council has in hand the latest in abattoir facilities, estimated to cost more than \$400,000. Planning was by Australian



Southland Museum, Invercargill.

—Hazeldine Photo

and New Zealand abattoir engineering experts.

Sewage Plant

To the south will be New Zealand's most modern sewage treatment plant, a \$600,000-plus plant, plans of which were also prepared by consultants expert in the field of sewage treatment. The site for the building, containing office, laboratory, staff and control rooms and maintenance workshop, is being landscaped with trees and gardens. The end product of the plant, a soil-building fertiliser specially suited to sandy and clay-type soils, is expected to be in demand.

Administration Building

For itself, the council is proceeding with plans for a \$500,000 five-storey administration building to go beside the Town Hall. It will be a 40,000 sq. ft structure and the community by and large is looking forward to the big block with the same sense of responsibility it shows towards the council's second large block of flats for pensioners.

However, the council is best known perhaps for its planning and help for recreation. Invercargill has been made a playground city. There are about 650 acres for recreation, 425 acres active and 225 acres passive — and there are plans for a further 220 acres.

Sports and Playgrounds

With areas beyond the boundary, the council is responsible for no fewer than 6500 acres, catering for the individual and 33 sports ranging from Rugby, soccer and athletics to golf, go-karting and skating. Children's small playgrounds are a feature of the grand plan, which is for a playground within half a mile of every city child. But every age has its share.

There are large sports grounds such as Rugby Park where a big grandstand addition was erected recently; Surrey Park where soccer and athletics interests combined with the council for a large, new grandstand; Turnbull Thomson Park; Kew Park and its widely-known

track cycling bowl; Waverley Park, and many others. Even the council's vast new reservoir provides for tennis and basketball on the roof.

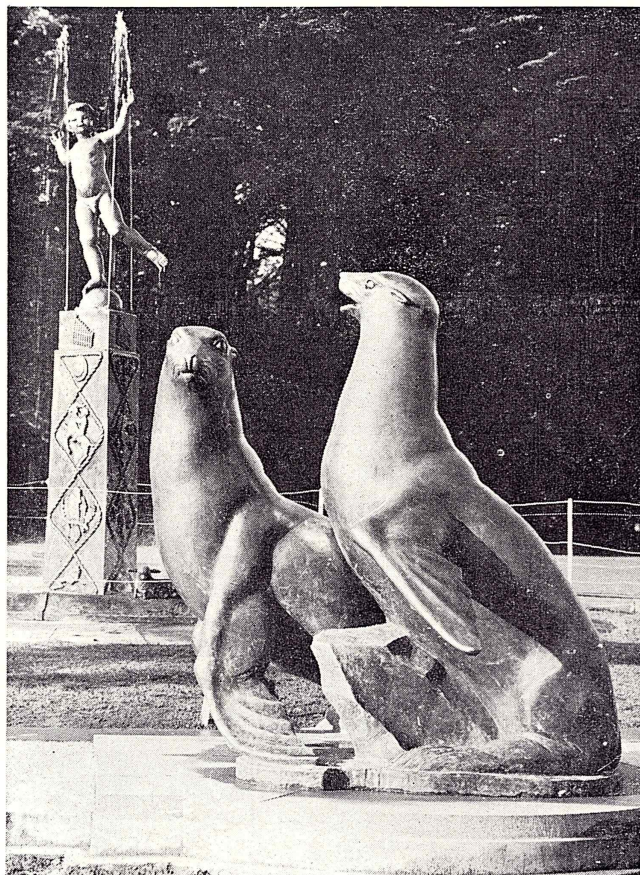
Immaculate Gardens

Then immaculate gardens bound the Otepun stream running through the city centre. To the north is a 12-acre scenic reserve, while beyond the city boundary are still larger developing areas.

Beautiful Anderson Park with art gallery; Seaward Bush — 500 acres of scenic reserve and forestry areas; Sandy Point — 5000 acres being developed rapidly for camping, picnicking and all types of water and field sports, and known abroad for the Teretonga International Motor-Racing Circuit. First steps have also been taken there for the third golf course or links in or around the city.

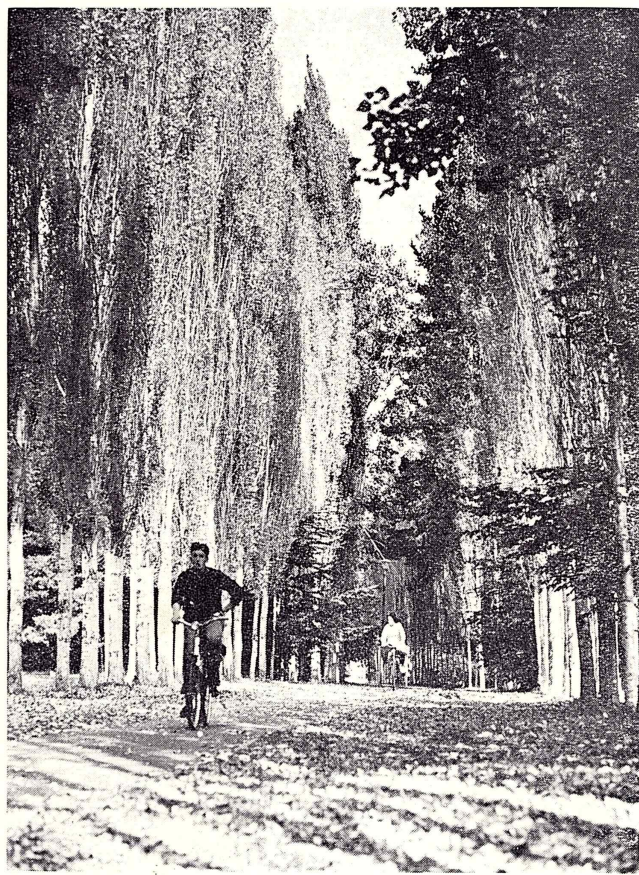
Queen's Park

Showplace of them all, though, is the 200-acre Queen's Park right in the heart of the city, perhaps the finest park of



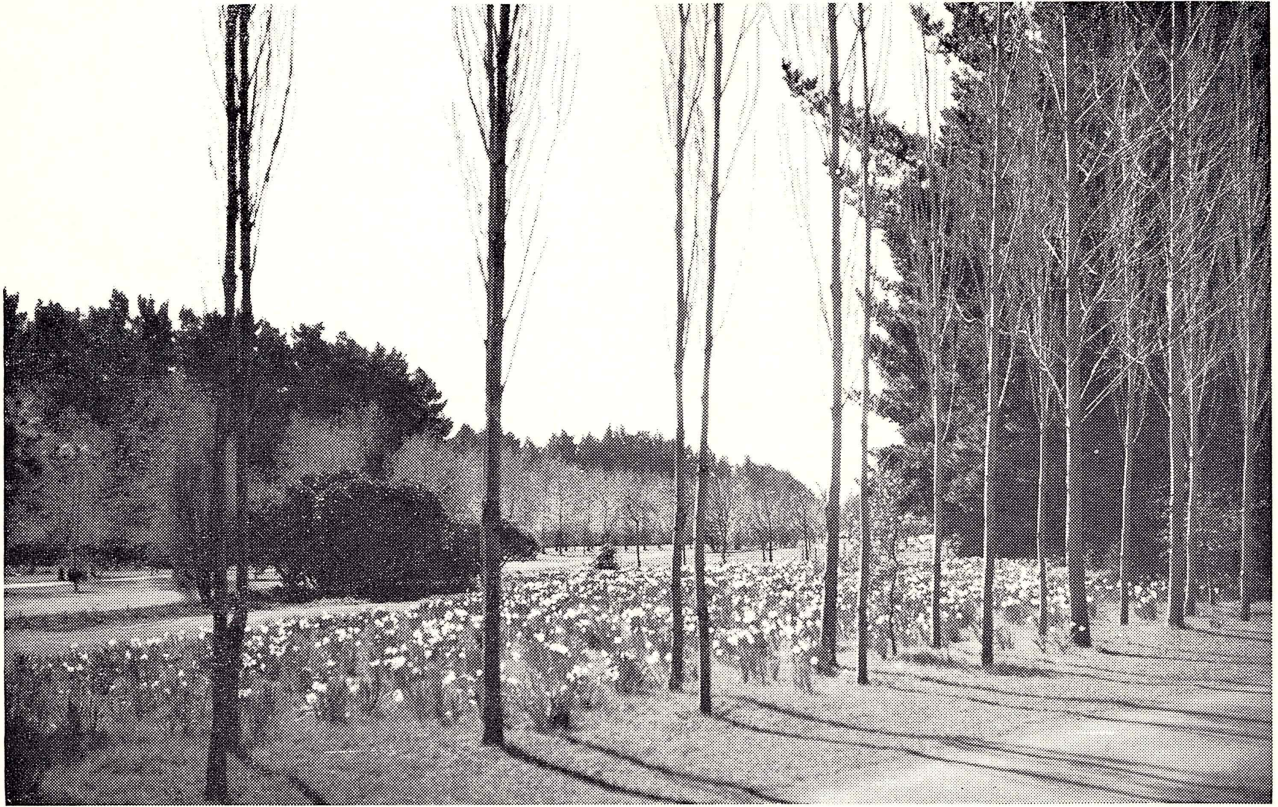
Designed and sculptured by Sir Charles Wheeler and erected by funds from the Thomson Estate — statutory in Queen's Park.

—Hazeldine Photo



Cycling through Queen's Park.

—Hazeldine Photo



With winter past, spring comes in a blaze of colour to Invercargill when the city parks are at their best.

—Whites Aviation

the kind in New Zealand. The former city racetrack, Queen's Park has a golf course of acclaim, facilities for five or more other sports, a museum, tea kiosk, ponds, aviary, deer enclosure, winter gardens, rose garden, rockeries, band rotunda, paddling pool and other children's playground facilities without equal.

There in a sheltered nook at one end of the children's playground is a \$90,000 statuary arrangement, executed by Sir Charles Wheeler, eminent British sculptor and unveiled by the Queen Mother in April, 1966, on the first day of her tour of New Zealand. The 50ft diameter group is the result of a bequest from Mr J. B. Thomson, a prominent Invercargill businessman and benefactor. Everything about the statuary has been designed for the enjoyment of children, as was Mr Thomson's wish, and has been made to last.

A Fairyland

Around the concrete and ceramic-tiled perimeter are giant bronze lions, seals and an eagle, all designed to be easy on the pants and good for the imagination. Grass separates that outer section from a 3ft-wide granite path to which is joined a bronze raised rim to a pond,

and on the rim crouch squirrel, rabbits and other tiny creatures. The pond, also made with children in mind, has hardwearing blue tiles all around. Twelve sprays play gently from the rim of the mystic pond to the base of a bronze pedestal supporting a cherubic, glowing, 3ft 6in. Peter Pan, standing tiptoe and eternally gay within three tall streams of water. At night the whole group appears suddenly to park strollers and the first excited cry by a child is everlasting: "Mummy, mummy, look — it's fairyland."

Council's Budget

To its parks, playing fields and reserves, for maintenance and development, the City Council devotes 18 cents out of every \$2 collected from ratepayers. The balance of each \$2 is used thus: Refuse removal, health inspectors, etc., 14 cents; bus transport, 10 cents; sewerage and drainage, 13 cents; streets, footpaths, etc., 35 cents; street lighting, 2 cents; waterworks, 16 cents; loan charges for capital works, 48 cents; tepid baths, 3 cents; library, 6 cents; general purposes, 29 cents; catchment board levy, 4 cents; harbour board levy, 12 cents; fire board levy, 6 cents. That gives a total of \$2.16, from which is deducted

16 cents made up by a contribution from the electricity and traffic accounts and opening credit balance.

Invercargill Licensing Trust

On a more concentrated scale, achievements of the Invercargill Licensing Trust are no less impressive. It was New Zealand's first such experiment, and an outstanding success. The trust was born when the Government was faced with the need for an orderly system following the carrying of restoration in the district in November, 1943. Within little more than four months, legislation was passed and, after 38 years of no licence, people came hundreds of miles for the May, 1944, celebrations at the trust's first licensed premises.

The trust has overcome its critics in the way it has gone about providing good accommodation and liquor outlets. Its taverns and bottle store facilities and range of quality hotels are unsurpassed anywhere in New Zealand and have been viewed with considerable interest at top levels overseas. Its 21st birthday present, a \$1,200,000 multi-storey hotel, is a prime example, not least because it was the first big hotel planned outside the Tourist Hotel Corporation since World War II.

Chas. G. King & Co. Ltd.



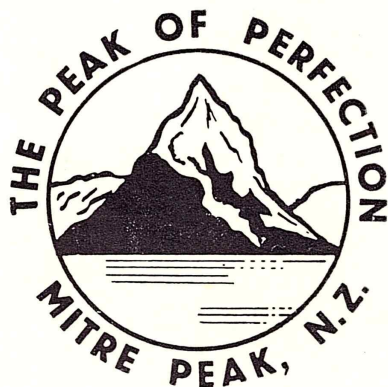
King's fleet of trucks feed the province.

First and foremost, the latest and modern up-to-date packaging methods used in New Zealand.

Wholesalers and distributors of fresh fish, prepacked meat and small goods. Oysters, pork and bacon. Covering the entire province of Southland.

Associated Companies:

Kings Fish Supply and
Dining Rooms Ltd.



Kings Super Meat
Market Ltd.

Kings Foodland, Tay St.
Phone 88-014
Box 345

THE HALLMARK OF QUALITY
TAY STREET, INVERCARGILL, NEW ZEALAND

Phone 88-014

Kelvin Hotel

The big Kelvin Hotel accommodates 116 guests in 86 bedrooms and four suites; there are 28 staff bedrooms. The four bars are carpeted and on the ground floor are shops and a bottle store. The main dining room and adjoining dining annexes seat 150 guests. Seventeen balconies give wide views of the city and on the sixth floor are conference and dine-and-dance rooms. However, the trust has been far from devoting all its attentions lately to the Kelvin. Before the sixth hotel was erected, while it was going up and since it opened at the beginning of 1965 with patronage fully up to, if not exceeding, expectations, other capital developments have gone ahead. And plans will keep the trust in the van of city progress.

Trust's Donations

Its hefty five-figure profits are not all applied to the hotel and liquor business, either. Since its inception the trust has donated \$188,000 to welfare, recreational, cultural and miscellaneous organisations and bodies — from bands, sports and the museum, to handicapped children. It has guaranteed finance for a surgical wing at the new Calvary Hospital in the city and provided \$10,000 towards the \$36,000 soccer and athletics grandstand at Surrey Park.

Building Boom

The trust's vigour has contributed significantly to the city building boom, which has long been well above or around the \$4,000,000 mark yearly. Buildings valued at more than \$40 million have been erected in Southland in the last five years and Invercargill's share of that exceeds \$18 million. Building varies from housing to welfare services, private hotel and motel accommodation and a large block for Government departments.

They include a large clinical services block for the Southland Hospital, Kew; a combined school and hostel costing about \$200,000 for intellectually handicapped children; school buildings and renovations approaching \$300,000; a \$60,000 community centre for old people; plus numerous commercial buildings. The block opened in 1966 for Government departments is fully in keeping, a \$922,000 structure enabling the departments to serve the public more efficiently and conveniently. Gross floor space of that building alone is 73,600 sq. ft and net office space 45,000 sq. ft.

Residential Building

Steady if less obviously dramatic is the residential activity, above or approaching \$2,000,000 in value yearly. Evidence of demand is seen in the provision of 300 acres designed as a safety valve for a few years for State units

and Crown land building. That one area will yield up to 1400 sections; the first homes are now on the first 50-acre block. In addition are private subdivisions in nearly every corner of the city.

Community Generosity

And the love the people have for this City of the Plains goes deep. The love bred from unity of purpose cannot be reflected better than in the community's generosity, even open-handedness for any one in need. Thus the Intellectually Handicapped Children's Society's Southland branch centred in Invercargill was able to raise more than \$64,000 in one appeal. More recently, a campaign committee including representatives of the Chamber of Commerce, Headmasters' Association, Rotary, Jaycee, Lions and the Southland Swimming Centre won glad support in a fund-raising drive for a 25-metre heated pool that will be additional to the city's large tepid swimming pool that attracts 126,000 users each season.

At the same time big sums have been given to the blind for a community centre and to a multitude of other causes. Even the Invercargill Borstal Institution is integrated into the community as far as possible, leading to success with New Zealand's first pre-release hostel for trainees and to a Lions-sponsored body known as the Tigers Club, first of the kind in the world; Tigers have taken on many charitable jobs and helped raise money for charities and organisations.

Not long ago it was calculated that Southland-wide donations to charities — spearheaded by Invercargill — averaged \$2 a year from every man, woman and child, a total that excluded all money raised by raffles and other small-scale localised efforts.

P. H. Vickery Bequest

Equally big amounts go to the community by way of bequests. No gift has been larger than that from a former Invercargill businessman, Mr P. H. Vickery, who in 1963 set up a \$500,000 trust for the welfare of Southland old people. The trust has helped in the provision of many amenities for Southland old people and is a key party in steps towards a 40-bed home that is expected to be a model for New Zealand when ready in Invercargill for the frail ambulant.

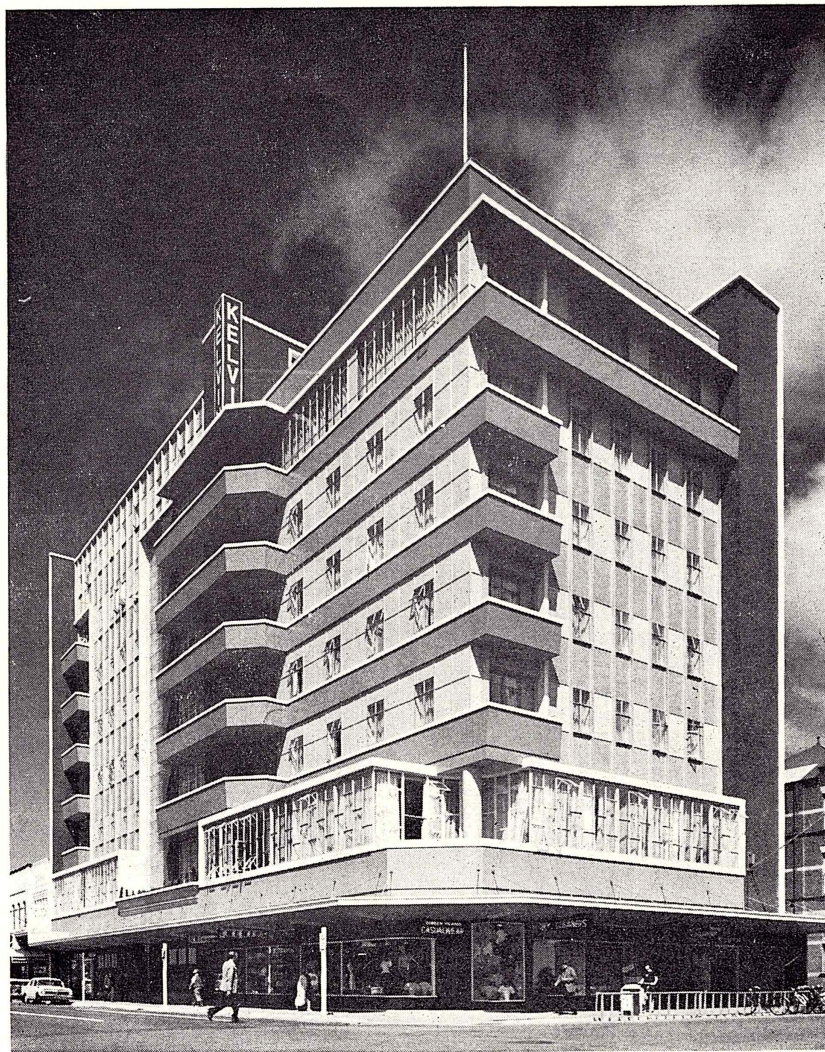
Invercargill has achieved much, but expects to achieve a lot more — and should. Right now it is laying plans for its second century, the centennial of Invercargill being due in 1971.



Scottish Country Dancing display.

—Hazelidine Photo

INVERCARGILL LICENSING TRUST



Invercargill Licensing Trust, Kelvin Hotel.

—Hazeldine Photo

An Introduction

THE Invercargill Licensing Trust is not only one of the finest hotel organisations in New Zealand today, but it is also a local public benefit organisation which ploughs its profits into the construction and development of enterprises that benefit the whole community, whether they be drinker, non-drinker, youngster or old-timer.

The Invercargill Licensing Trust, the first trust in New Zealand, has come a long way since 1944 when the town got back its licence after being dry for 38 years.

The Trust Expands

From two taverns and a licensed restaurant in 1944 the Trust has progressed to where it is today with six hotels, five taverns (no accommodation) and five bottle stores. The Trust hotels are the Kelvin, Grand, Southland, Cecil, Avenal, Deschlers; taverns, Waikiwi, Glengarry, Northern, Clyde and Appleby; bottle stores only, Collingwood, East End, Mary Street, Spey Street and Rugby Park. In addition, the Trust operates a banquet hall which is a popular venue for weddings and balls and beside the usual associated activities owns a farm which supplies fresh eggs and vegetables for the hotels. Turnover now exceeds £1,500,000 annually.

A Service to the Community and New Zealand

While it is up to the Trust to provide adequate accommodation of a good standard, one of its biggest tasks is providing enough suitable outlets for liquor and this is where the tavern has come into its own.

The Trust has built taverns throughout the city to provide this outlet — the most luxurious of these being the Waikiwi tavern which was opened last year.

In spite of this impressive line-up of public drinking and accommodation facilities, which many a city in the Dominion would be proud of, and which no doubt a few are jealous of, the new seven-storey Kelvin Hotel is the pride and joy of the Trust and the people of Invercargill.

Built at a cost of £650,000 and towering 120ft up from the heart of the city, the Kelvin was opened in 1965, the 21st year of the Trust's existence.

With 86 bedrooms, 56 single rooms, 24 double rooms and four suites, the Kelvin Hotel can accommodate 120 guests. There are also 24 staff bedrooms.

Making up the hotel's drinking facilities are — public bar, club bar, spirit bar, house bar and bottle store. All of these, with the exception of the house bar, are on the ground floor. The house bar is on the first floor next to the lounge which seats 150 guests and the dining room which also seats 150 guests.

The second, third, fourth, and fifth floors are the bedroom floors, while the sixth floor contains a conference room with a maximum seating capacity of 300 and a late dining room to seat 90 guests.

The seventh floor holds the staff quarters and observation balcony.

Working for Southland

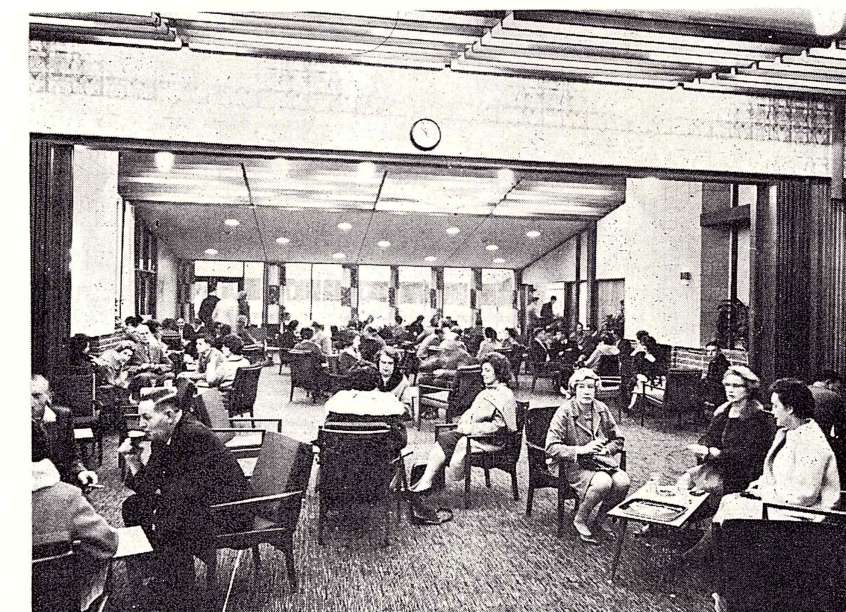
Right from the start the Trust has adopted a policy of giving back to the City of Invercargill a fair-sized portion of its profits and this way everyone has benefited.

To date the Trust has given nearly £100,000 back to the community.

Each year the Trust sets aside a certain amount of money for distribution to sporting, recreational, welfare, and cultural organisations — one of its greatest monuments being the learners' swimming pool it gave to the children of Invercargill. This cost the Trust more than £16,000.

Back to 1943

How the Trust came about. Following the vote for restoration in 1943 the Government was placed with the problem of restoring the flow of liquor. Controversy prevailed and suggestion fol-



The Waikiwi Tavern.

—Hazeldine Photo

lowed suggestion. However, community-owned outlets appealed more than private enterprise.

The Invercargill City Council was asked to consider setting up a department to trade in liquor, but it turned the idea down.

Then on April 4, 1944, the Government passed the Invercargill Licensing Trust Act, and thus the experiment started.

Members were appointed by the Government and the city and Trust set about

keeping an implied promise that the hotels would be open on July 1.

With building materials and labour in short supply, the Trust could not have opened at a less opportune time — the only thing in its favour being the parched public.

The first meeting of the Trust on May 1 soon got into the problem of providing suitable bars and decided to open two. The Works Department set to putting up prefabricated buildings and then on July 1 all was ready.

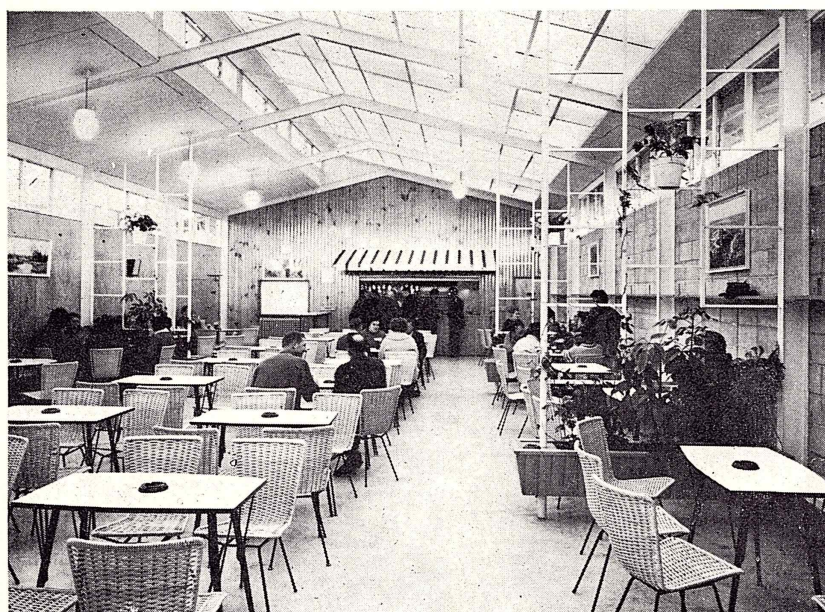
This was only the start for the Trust which went on to acquire properties in the business area of the city, including the Grand, Cecil and Deschlers Hotels.

The first major building undertaken by the Trust was the erection of the Southland Hotel in 1946.

In 1950 in accordance with Government policy the Trust was made an elected body, three of the six members retiring at each perennial election of local bodies.

And so today after 22 years the citizens of Invercargill are the owners of a vast undertaking, with a great potential for future trading and with assets conservatively estimated at two million pounds.

In the foreseeable future besides providing first class accommodation for the travelling and drinking public, the Trust will be in a position to plough back into the city by way of donations substantial sums which will benefit all sections of the community.



Garden bar at Glengarry, an Invercargill Licensing Trust tavern.

—Hazeldine Photo

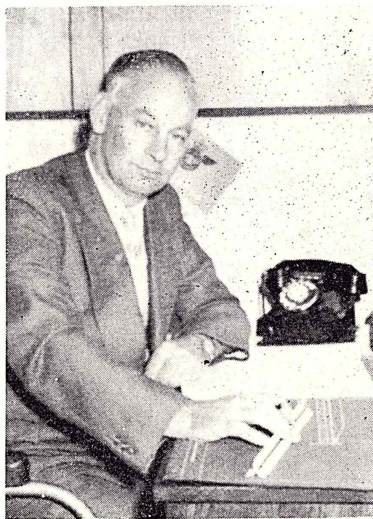
W. A. DUNN & CO. LTD.

BUILDERS OF DISTINCTION

THE firm of W. A. Dunn & Co. Ltd has the staff, equipment and the experience to complete speedily all contracts undertaken by their organisation.

A most efficient costing system and the use of latest building techniques are good reasons why the company is able to tender successfully for so many contracts.

The company deserves its reputation for being one of the fastest contracting companies in New Zealand. Owing to their efficient and well organised programming they are able to complete a project without delay and without unnecessary additional expense.



MR G. H. BENTLEY

Manager, Housing Division. Was a builder on his own account for many years before joining the firm.

Mr W. A. Dunn, the company's managing director, served his apprenticeship with the Love Construction Co. in Dunedin prior to World War II, and received a thorough grounding in all stages of building construction, including draughting, quantity surveying, costing, etc., and it was this knowledge and experience which led to his appointment as Chief Carpentry Instructor for the Rehabilitation Department's trade training scheme in Invercargill.

From there Mr Dunn formed his company in 1948, and since that time has completed a large number of contracts in Invercargill and surrounding districts, and the company has won many friends through its high quality of workmanship. This has resulted in many "repeat" jobs. The firm now has a staff of 40 and is a member of the Master Builders' Association Inc.

A specialty of W. A. Dunn & Co. Ltd is the "Premier" pre-built home service. The firm designs high-class homes to the requirements of each client for no extra charge. The Premier home is not pre-fabricated, but built as a unit in the workshops the same as it would be built on the building site. Continuous floors and double bracing throughout enables removal without any damage and provides a better-braced home. This type of home eliminates the expense of material cartages, travelling time of



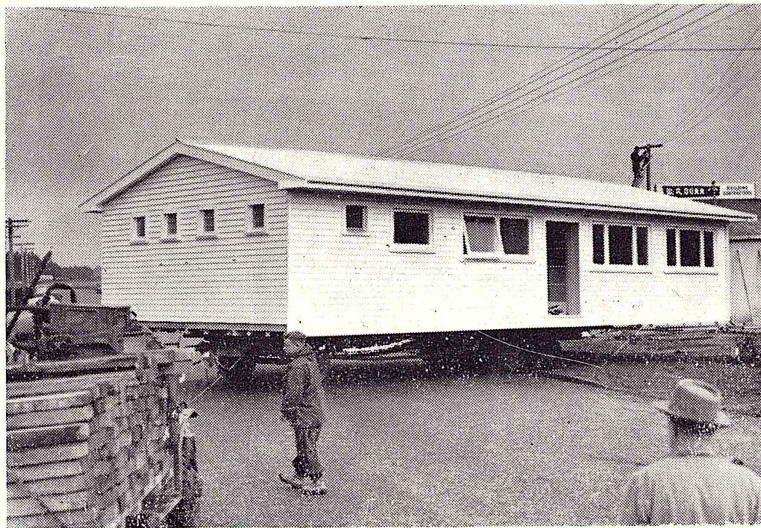
MR W. A. DUNN
Managing Director.

tradesmen and the inconvenience of having tradesmen on the building site for long periods.

The company employs a staff of skilled tradesmen and has its own draughting and design office. It also provides the services of a registered structural engineer for the convenience of clients.

"Premier" — the home with eight exclusive features.

1. Built to a standard, not down to a price.
2. Architectural designed to the client's own requirements.
3. Designed and constructed to be transported.
4. Built in brick, permaflex or weather-board.
5. No limit to size or shape.
6. Each home with a difference.
7. Available at any stage of construction.
8. Highest standard of finish.



Left:

PRE-BUILT

Built in 25 days, a pre-built Staff Amenities building for C. G. King & Co. Ltd, leaving our workshops.

Right:

A NEW RECORD

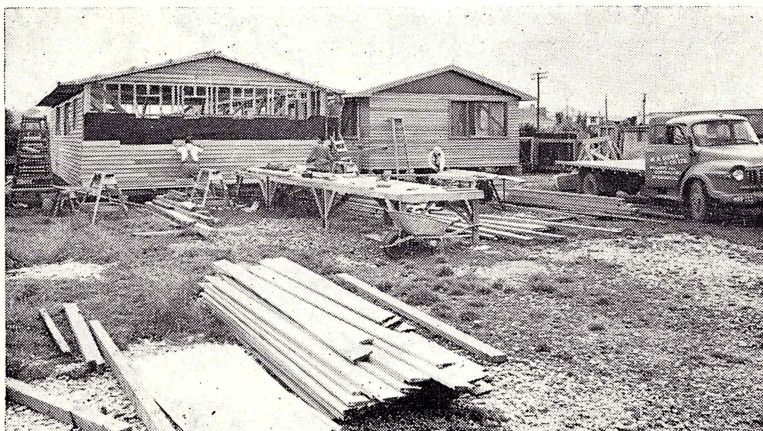
Completely built with all fittings, painted and floor coverings laid in only 14 days and transported on the 15th day is the new 1200 sq. ft. Supermarket for M. Barrett, shown above starting its 70 miles journey to Mossburn.



HOUSE BUILDING

At the firm's workshop in Otepunu Avenue a large staff is engaged in the construction of "PREMIER" PRE-BUILD HOMES and all other types of pre-built buildings.

The Housing Division is noted for its ability to turn out work speedily and still retain good workmanship with top class material. With excellent co-operation given by our sub-contractors this division is geared to handle all types of pre-built buildings at the shortest notice.

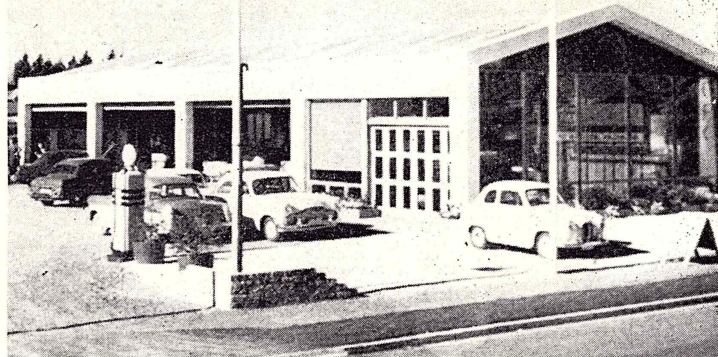


A complete service from the drawing board to completion.

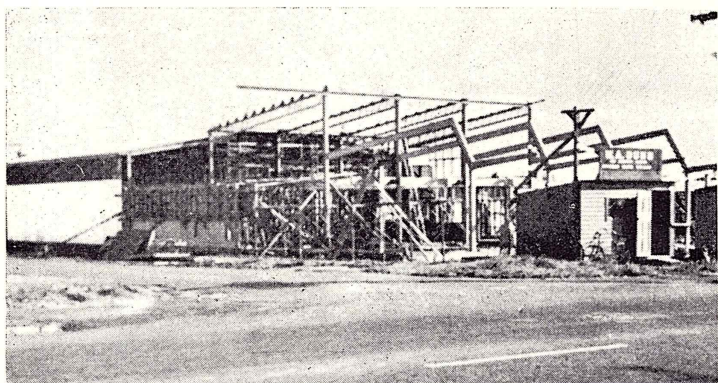
A CORNER OF OUR HOUSING YARD — showing homes under construction.



Showroom, offices and workshops, C. H. Faul and Co. Ltd.



Motor garage and showroom, Macaulay Motors Ltd.



Workshops, offices and showroom for J.J. Ltd. Designed and built by W. A. Dunn & Co. Ltd.



Offices, laboratory, board room, etc., for the Southland Co-op. Phosphate Co. Ltd.

W. A. DUNN & CO. LTD.

OTEPUNI AVENUE

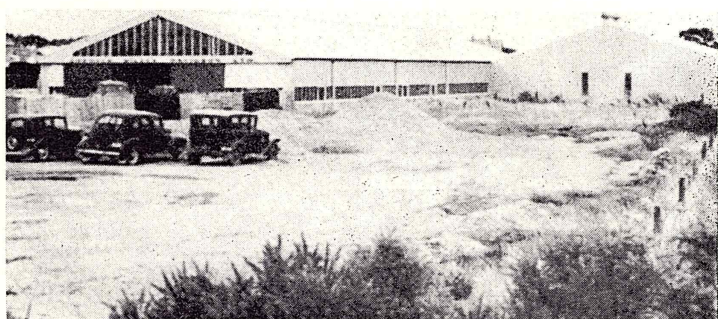
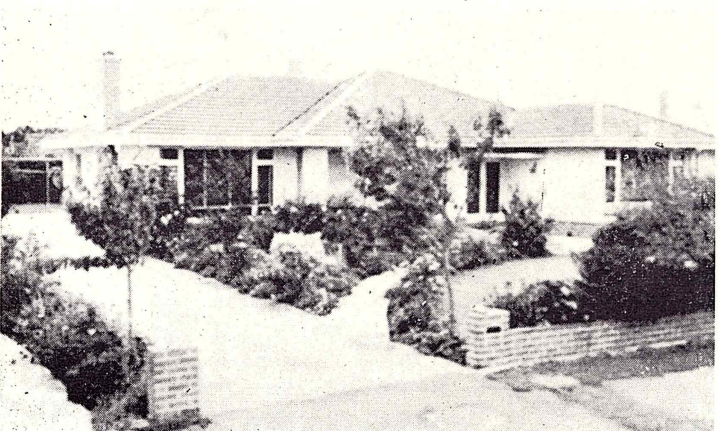
INVERCARGILL

Phones: 69-189
69-535

After Hours:

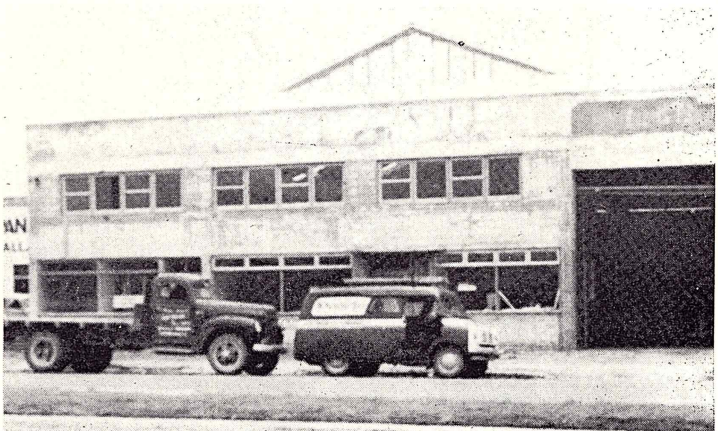
Commercial buildings:	88-533
Prefabricated Division	68-434

BELOW: Sample of quality homes built under the supervision of of Mr G. H. Bentley.



Panelbeating and Car Painting Dept., Gormack, Wilkes, Davidson Ltd. Designed and built by W. A. Dunn & Co. Ltd.

Offices and bulk store for Ian Guise Ltd.





Invercargill branch with open-air storage area at right.

WINSTONE (S.I.) LTD.

Introducing Winstone Ltd to the South

ON land bought in Invercargill in 1964 to coincide with Winstone Limited's centenary now stands the company's most southern outpost of a vast New Zealand network.

The setting up of an Invercargill branch was just another step of the many already taken so far, by New Zealand's leading builders supplies company, Winstone Ltd, to give the building trade better service.

Sited on 2½ acres of land in Otepunu Avenue with its own private railway siding, the Invercargill headquarters, which includes office block and store-room area, and fenced and sealed open-air yard, is playing an important part in probably New Zealand's most potential loaded province, Southland.

Southland an Ever Expanding Province — and with Southland Winstone's Will Grow

Heading the Invercargill staff of 11 which handle all aspects of the trade is manager Mr G. B. Rogerson, a Southlander born and bred.

Educated at the Southland Boys' High School, Mr Rogerson has been with the Invercargill's local hardware merchants for the past 24 years, apart from

two years helping out in his father's building firm and two years in Australia. He joined Winstone's in May last year.

From Small Beginnings

Had it not been for the foresight and initiative of one William Winstone, a mere 16-year-old youth when he landed in Auckland from England in 1859, Winstone's wouldn't be the company it is today and Southland would not have its important business either.

Working at planting potatoes and as a teamster, young William saved his shillings, for he knew if he was going to get away from being a farm worker he would need them. He had great knowledge and skill with horses and he loved working with them. It was this no doubt that played a big part in his decision to start a carrying business in Auckland. This was the one occupation, apart from farming, which would let him use his knowledge of horses to the best advantage.

Just when William was ready to put his plans into action the war with the Waikato Maoris broke out, and with the call-up of all able-bodied men between the ages of 16 and 60, young Winstone had to resign himself to

another delay in his business plans.

Although he trained for the defence of Auckland, Winstone was deemed more valuable on the transport side of the war effort, carting supplies to the troops.

The Beginning of Winstones

At the war's end he was quickly in business on his own account as a carrier and coal merchant — the year 1864. (It is interesting to note the company only closed down its coal and firewood department in 1964 — 100 years after it had started the service.)

Now with Auckland booming, Mr W. Winstone found that if he was to grow with it he would have to employ staff and increase his number of vehicles and horses. And this he did. While Mr William Winstone, previous to this, saved money hard, young brother George was doing the same in Queensland, Australia.

A Partnership

The two wrote occasionally and it was in one of these letters the idea of George Winstone coming to New Zealand too was born. George Winstone arrived in Auckland in 1869 and the two brothers went into partnership in the same year.

Although William Winstone had laid

the foundation, George's shoulder added weight to the rolling wheel, a wheel that has spun Winstone Ltd to where it is today, a nation-wide firm. The partnership was to grow to such an extent that a new system of capitalisation was to be required. And in 1904 the partnership of William and George Winstone's changed into a limited liability company with a nominal capital of £20,000 and annual turnover of over £50,000 under the well recognised name it bears today, Winstone Ltd.

Transport from Four Legs and Sails to Four Wheels and Engines to Develop with the Times

Up until 1904 the company's main concern was carrying, however, with the gradual taking over of more responsibility by Mr George Winstone, junior, the company became more interested in supplying general requirements of the building industry — a field in which Winstone's specialise in today.

The company probed into the brick-making field, cement and roof tile manufacturing.

Winstones moved with the times, going into motor vehicles, developing their fleet with both heavy and light vehicles. However, this build-up was slow. In 1924 the company was operating 24 motor vehicles with 250 horses still in service. In 1945 it was the opposite. The company had 200 vehicles then and only four horses.

Winstone's, both the partnership and the later company, did not stay on land. They took to the water and using scows, barges and schooners, helped bring to Auckland's shores the stone, shingle and sand and material needed to build a growing city.

The Wheel of Progress

Few firms in New Zealand have expanded as rapidly as Winstone Ltd since the last war. While in early years the company confined its activities to the Auckland area, it later extended into other parts of the country. This is a policy that still continues today and one which has made Winstone Ltd one of New Zealand's largest trading and manufacturing organisations.

An Indication of Winstone's Service to New Zealand

The Head Office of Winstone Ltd is in Winstone Building, a prominent office block in the busy Auckland Queen Street business area. However, there is no Auckland branch of the company — the function of a branch in the city and suburbs being performed by the head office.

The job of the branches is to sell and service the materials supplied by Winstone Ltd and subsidiary and associate companies.

These branches are at Takapuna (North Shore branch), Hamilton, Tauranga, New Plymouth, Wanganui, Palmerston North, Wellington and Blenheim.

There are also subsidiary companies in Whangarei, Napier and Christchurch which perform the selling and servicing functions of a branch.

Winstone subsidiary companies are: Hardie Bros. Ltd; Winstone Cranby Ltd; Winstone (S.I.) Ltd, changed from Winstone Blackburne Smith Ltd in 1963; City Investment Ltd; Winstone Clay Products Ltd; N.Z. Wallboards Ltd; Bridgestone Tyres (N.Z.) Ltd; Winstone Products (N.Z.) Ltd; Steel Benders and Suppliers Ltd; Steele Engineering Co. Ltd; Huntly Brick Co. Ltd; Tauwhare Metal Supplies Ltd; R. M. Neville-White Ltd; W. A. Herkt and Sons Ltd; Belspray Asphalts Ltd; L. W. Waldron and Sons Ltd; Specified Concrete Ltd; Whangarei Transport Ltd; and Novoplast Ltd.

While most of these subsidiaries are concerned with the supply or manufacture of building materials, there are two exceptions. These are the City Investment Ltd, which owns and administers the Winstone Ltd head office building in Auckland, and Winstone Products (N.Z.) Ltd, a London office set up to watch Winstone's interest abroad.

The associate companies, like most of the subsidiaries, are mainly connected with the building materials industry. These include Certified Concrete Ltd; Victor Plasters Ltd; Atlas Products (N.Z.)

Ltd; Steelfab and Sales Ltd; and K. T. Wilkinson Ltd.

The Birth of an Industry

Probably the best known Winstone Ltd product is Gibraltar Board. Until the mid 1920s the source of most of New Zealand's plaster wallboard was North America. However, there were men who were confident the product could be made in New Zealand. One of these men was Mr Harold Hitchon, who was instrumental in setting up the Auckland company of Builders' Composite Materials Ltd in 1925.

This company was soon producing high quality plaster wallboard, the demand for which soon outstripped the capacity of the company's modest factory.

Building into a Company

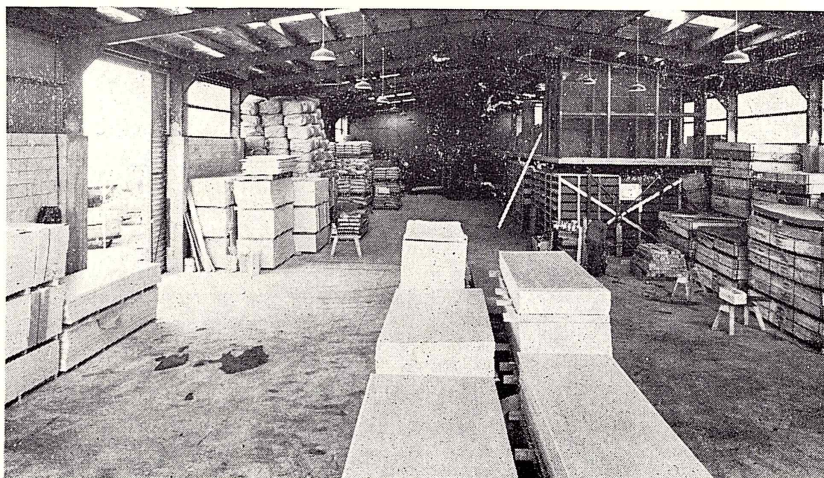
Two years after its formation the Builders' Composite Materials Ltd was changed to the company's present day name of N.Z. Wallboards Ltd.

The share capital of the company was increased, a bigger site was obtained for a new factory and Winstone Ltd were appointed distributing agents on the understanding that they would purchase all the factory's output.

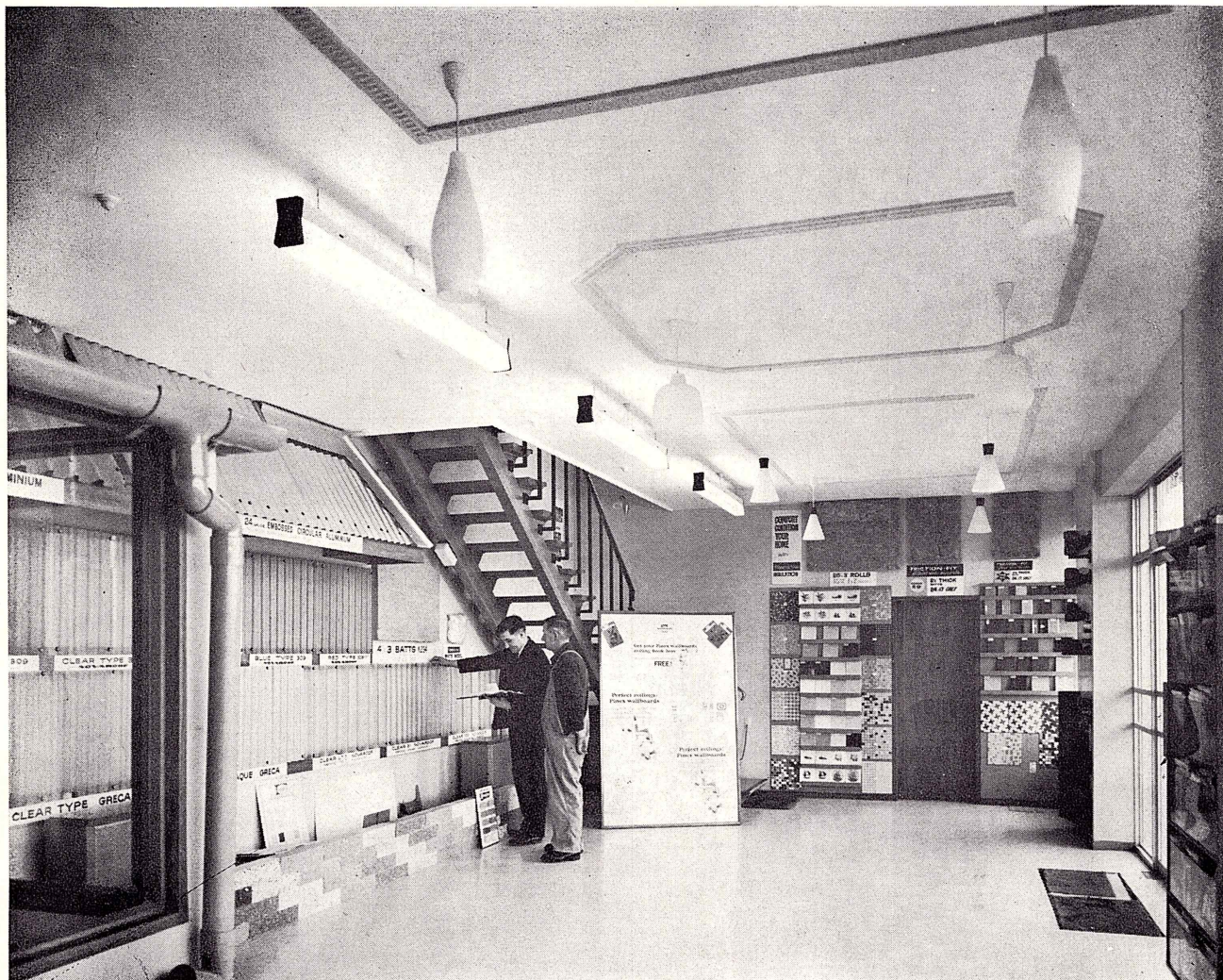
In 1928 Winstone Ltd became a shareholder in the company. In a trip to the United States in this same year Mr O. K. Winstone was requested to look into modern methods of wallboard production.

Up until this time the Auckland factory was working a hand-operated procedure which was soon proved inadequate by demand.

As the result of Mr Winstone's visit, the United States Gypsum Company



Storage area at Winstones' Invercargill branch.



Winstone's Invercargill showroom.

agreed to supply N.Z. Wallboards with the latest machinery.

On returning to New Zealand in 1930 Mr Winstone recommended a move that has played a big part in the production of New Zealand Gibraltar board. Instead of sawdust as previously used in the core, Mr Winstone recommended pumice.

The majority of shareholders in the company did not agree with the modernisation of the plant and the introduction of pumice into the product.

Winstone's stuck fast. They had faith in the idea. Arrangements were made which gave Winstone's the majority of shares in N.Z. Wallboards Ltd and the former shareholders a tidy profit on their investment.

In 1931 the new plant, installed by the United States Gypsum Company, started operations.

Up until this time the wallboard was

basically of sawdust-plaster core, with open edges, and marketed as Winstone Board. However, towards the end of that year the name was changed to the name we know so well today — Gibraltar Board. This came after the open edges were replaced by selvedge-edge board and the core changed to New Zealand pumice.

There was another important change in 1936 with a Winstone associated company, Victor Plasters Ltd, taking over the supply of plaster which had previously come from America and Australia.

Another change came three years later when the company switched their source of supply for paper from America to New Zealand.

Supply and Demand

After the Second World War it was found the company's one Auckland fac-

tory was not enough so a factory was built in Lower Hutt.

In 1960 it became apparent the South Island needed a Gibraltar Board plant of its own. In the following year this plant started operations in Christchurch, but not before some problems were solved.

The first was the absence of suitable quantities of pumice in the South Island and another was getting gypsum plaster from the Auckland mill.

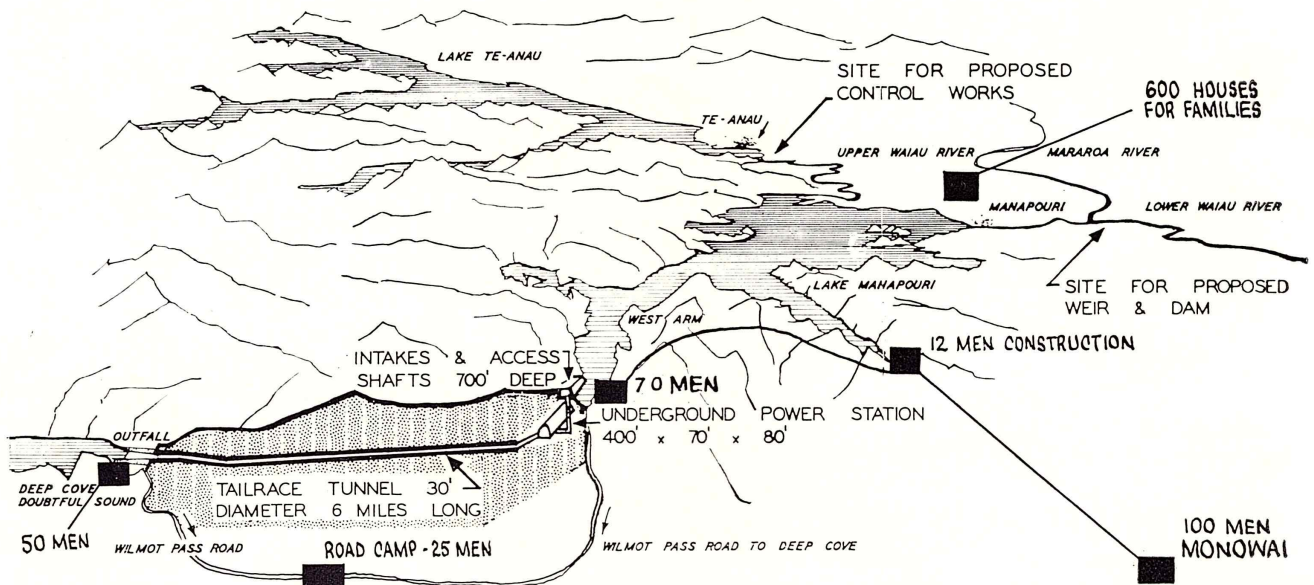
To get around these obstacles pumice was dropped from the South Island product, the almost-universal foam plaster process being used instead.

To beat the gypsum problem a Victor Plasters factory was set up in Christchurch right alongside the Gibraltar Board factory, the supplies of raw gypsum coming direct from Australia through Lyttelton.

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Commercial, Industrial and Residential Builders**

Have been working in conjunction with the massive Manapouri power project in building accommodation for 257 workers and houses for 600 families as shown below.



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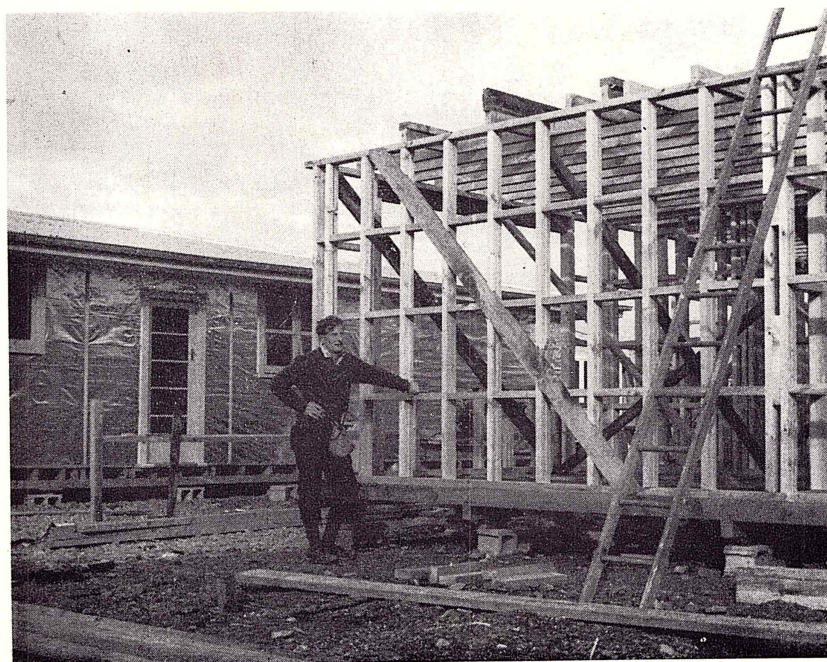
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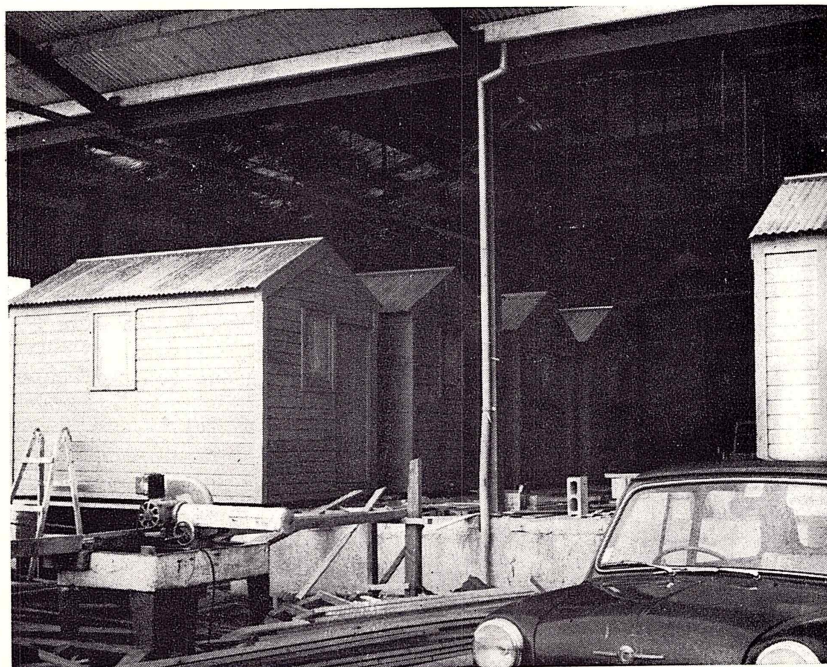
Inquiries Welcome



REGISTERED MASTER BUILDER



Jim Livingstone, one of the founder-partners in the firm of McKenzie and Livingstone, shown in front of a custom-built prefabricated home.



Huts like these were being turned out at six per day by McKenzie and Livingstone for various construction sites in Southland.

Phone 82-484 by day or 79-298 outside normal working hours

WILLIAM SMITH & CO. LTD.

JOINERY MANUFACTURERS ——— TIMBER MERCHANTS

ALUMINIUM FABRICATORS

Cnr of NITH and FORTH STREETS, INVERCARGILL

Phone 3079

P.O. Box 284

COMBINING tradition of service to the public of Southland stretching back for more than 60 years and a proven record in leading the field with innovations is William Smith and Company Ltd, Invercargill.

Traditionally in the business of joinery manufacture, timber merchants

and distributors of wallboard and plywood, William Smith and Company have recently launched out into aluminium fabrication that is opening up exciting prospects of diversification.

William Smith & Co.'s production manager Bob Thomas has had wide experience in the field of joinery manufacture. Several ideas gleaned during a recent overseas trip have been introduced with success. One of these is the firm's venture into the field of "Aluminium Joinery."

Situated on a site right in the heart of the city and yet bounded on two sides by reserves the firm's main site covers one and three-quarter acres with another acre on Bluff road for drying timber and the aluminium division at Teviot Street.

This city address on the corner of Nith and Forth Streets is the original site of a firm taken over by William Smith, W. R. Riddell and J. J. Wesney in 1905. Today the family link is still present with Ralph Wesney as manager.

Technical advances have been responsible for a staff reduction over the years from 50 men in pre-war days to 30 now. But those 30 have some of the most up-to-date machines in the business. A worker's hand at William Smith is a powerful one compared with the days when Ralph Wesney began in 1933. Or even more powerful than when Ernie Hewitt began 46 years ago.

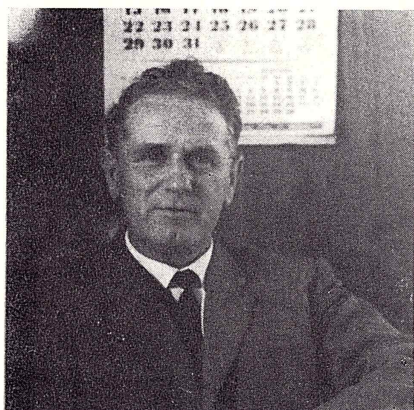
In that time the firm has helped the

province to acquire some of the prized selections of joinery that grace many city and country buildings. Some of the better known include the very fine curved seats in the imposing First Church in the city, the Invercargill Post Office, the Invercargill Central Methodist Church seats, Masonic Temple (Invercargill) and several other larger buildings in the province. Of course while these bigger units take the eye as it were, the basic product is joinery for the thousands of homes using Smith products and tailored to fit the customers' requirements. This "custom-built" reputation is one that the firm clings to as much in this mechanised age as it did in past years.

Full stocks of a great variety of woods are carried to meet a demand that is a fast one with the rapid expansion of the province. Over the years dwindling supplies of rimu have seen pinus radiata take an increasingly large share of total production. Mr Wesney says that pinus is now accepted because people recognise its positive values without the prejudice that once greeted its appearances.

A great variety of jobs are being carried out at any one time in the well-lit factory. Practically every man was on a different job when a recent inspection was made of the unit.

None was as big as the famous First Church seating contract. The stencils for this particular job involving curved



Mr Ralph Wesney, grandson of one of the firm's original founders, now manager of William Smith and Co. Ltd.

seats had to be set out in an open paddock.

The result is a talking point for visitors to the church — a city landmark.

Over the years Mr Wesney has seen other changes. Formerly the firm had its own mill at Waihoaka but this was closed down in 1938. Prewar importations of softboard from Canada, hardboard and deal from Scandinavia has given way to importations from North America and hard woods from Australia. The growth in boat building has been responsible for changes in imports to cater for this fast-growing market.

Today William Smith and Co. Ltd supply Auckland firms with Southland Beech and export radiata pine to Australia.

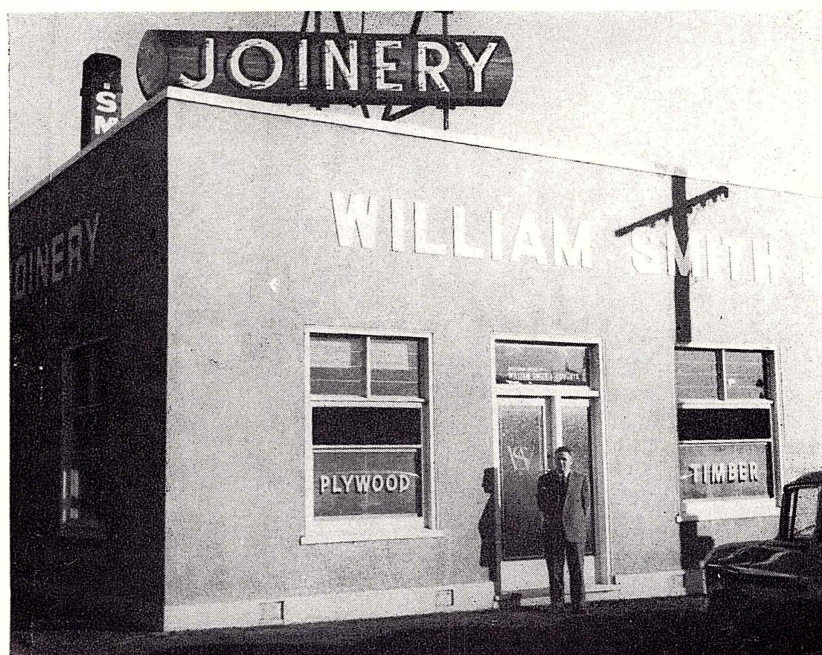
Keeping up with its tradition of leading in the provision of new amenities and services — the first major city firm to have electricity-driven machinery, first to have a steam drying kiln — the firm has bought a four sider flooring processor which can turn out 120ft a minute, triple drum sander the the latest in air guns.

But possibly the most important new development in the firm and one that shows that the management is alive to the competitive demands of the day is the launching out into aluminium fabrication. "Joinery firms have to keep up with latest demands," says Mr Wesney.

It has been granted the sole rights in Southland of overseas pattern extrusions marketed under the "Quality" brand and has thus access to overseas stylings that have already proved successful. These can be made to clients' specifications. Already shop front windows, sashes of all sizes, and a wide variety of household joinery is being made at the Teviot Street division.

These designs, up-to-date and smart, are attracting a great deal of interest within the industry.

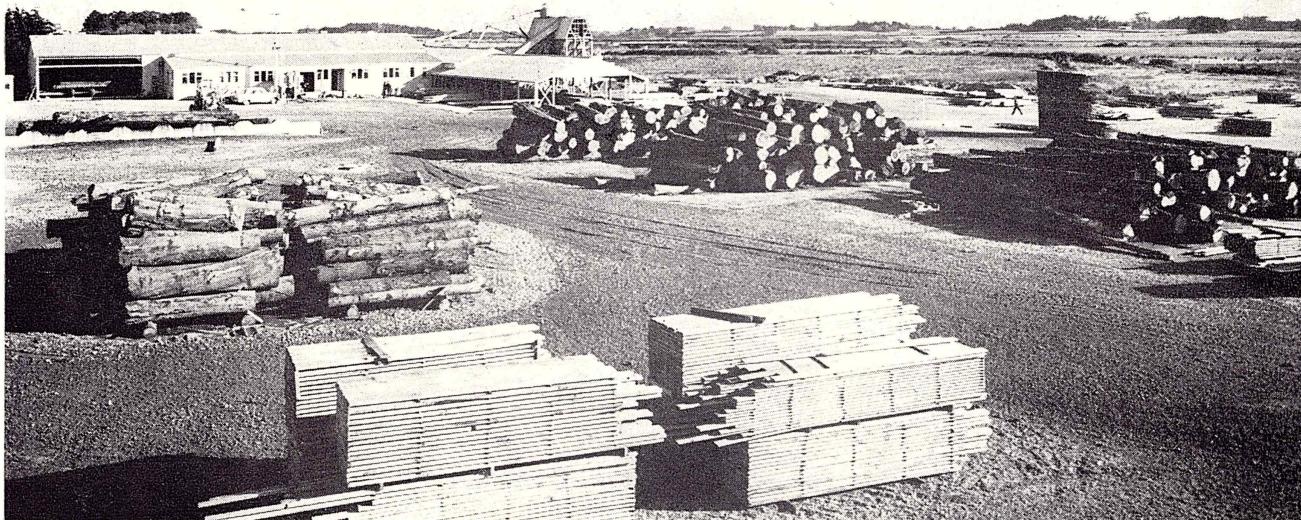
Served by men like Mr Wesney, grandson of the firm's founder member and Bill Riddell, grandson of one of the original partners, William Smith & Co. Ltd has maintained a great tradition. More important its enterprise in equipping the plant with the most up to date tools and moving out to meet the challenge of new products in the largely traditional joinery lines has underlined that the pioneering spirit which saw the firm lead the way decades ago has not been lost. This combination of traditional service and enterprise fits the firm well for the future in expanding Southland.



Long a landmark in the heart of the city, the Smith factory is bounded on two sides by city garden reserves and topped by the well-known chimney. In a way this is characteristic, for over the years the name of Smith and Southland have been associated when joinery is mentioned.



Some of the latest overseas styles are being marketed in aluminium by the recently established division of the long-established Invercargill firm of William Smith. Their smartness and lack of upkeep will make them an attractive string to an already hefty Smith joinery bow.



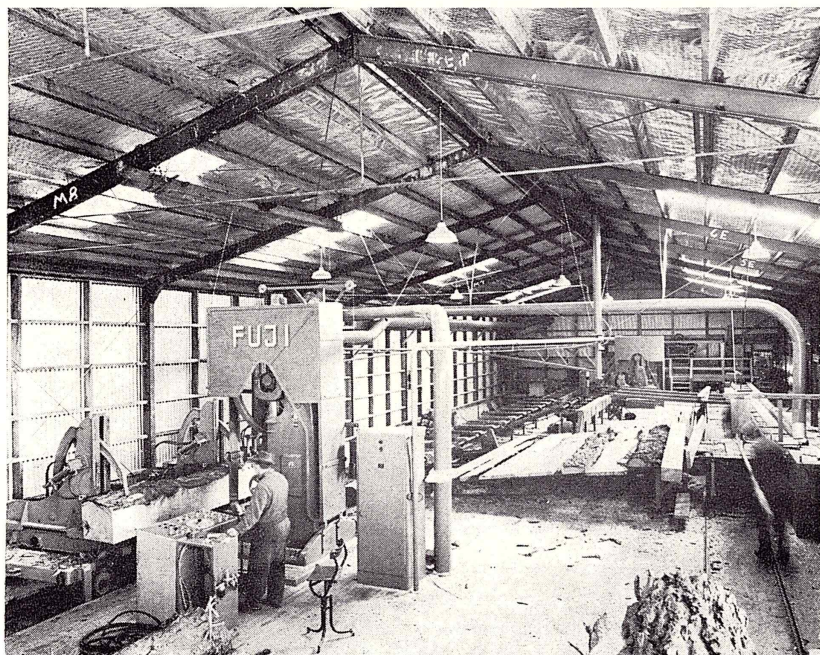
The new Niagara Sawmill at Kennington.

NIAGARA SAWMILLING CO. LTD.

Anglem Street

INVERCARGILL

Phone 76-089



FORMED in 1935, the Niagara Sawmilling Co. Ltd is one of the oldest sawmilling companies in Southland still in operation. Recently the company took another progressive step forward with the opening of modern new premises at Kennington.

The Niagara Company amalgamated with the Progress Valley Timber Company in 1934, working mainly in the Maori bushland and the Waikawa State Forest area. In the early years of the company's operations steam boilers were used in milling, operating circular saws for breaking down and resawing.

The trees were felled by two-men

The interior of the Kennington mill.

teams using cross-cut saws — certainly a great contrast to the complex Japanese and New Zealand-made machines operating in the new Kennington mill. Nevertheless these methods were used until the advent of the power-driven chainsaw in the early 1950s.

The company's timber trams, running on wooden rails, were replaced by diesel-powered locomotives running on steel tracks. However these have in turn been replaced by a good system of roads through the bushland and give access to the heavy logging trucks. The horses and steam-driven winches used in ground hauling have given way to diesel driven winches, backed by bulldozers.

When the old Progress Valley mill was closed down in 1964, the company had to find a suitable alternative site, with access to a ready supply of timber and markets to absorb the resultant products.

The company's final decision on the site at Kennington was influenced by its close proximity to the city of Invercargill, which could provide a sufficient labour force, and gave access to better educational and recreational facilities for the mill workers and their families.

Niagara Sawmilling Co. is closely associated with the firm of R. Richardson Ltd, the managing director of the Niagara Company being Mr H. G. Richardson. In 1938 Richardsons acquired a shareholding in the sawmills and since 1956 has had a controlling interest in the mill operations. Nat-

urally the Niagara mill has supplied sawn timber for Richardson's contracts. The new mill has continued to supply the demands of the Richardson company, but also supplies direct to the public.

R. Richardson Ltd has undertaken and completed many big contracts which include the construction of schools in the area, accommodation for the Manapouri Power Project workers and the 10 million gallon reservoir for the Invercargill City Council. All timber used on these contracts was supplied by the Niagara Sawmilling Company.

The new mill is situated on a 21 acre site on the old main road through Kennington. Its construction and machinery make it one of the most modern band saw milling companies in New Zealand.

The mill's modern equipment is varied as regards to origin, and includes a Japanese designed band breaking-down head rig machine, the saw blade of which is eight inches wide. The associated log carriage is New Zealand-made and is completely automatic. It was the first of its kind to be installed in New Zealand. The controls were developed and manufactured in Christchurch, and the log-turning equipment is New Zealand-made also.

The self-centering band resaw was imported from Belgium and has a six-inch blade. The waste slabs of timber are cut into small lengths for use as firewood by an automatic block cutting machine. The timber conveyor is fully automatic and air-controlled, and the grinding machines are also automatic.

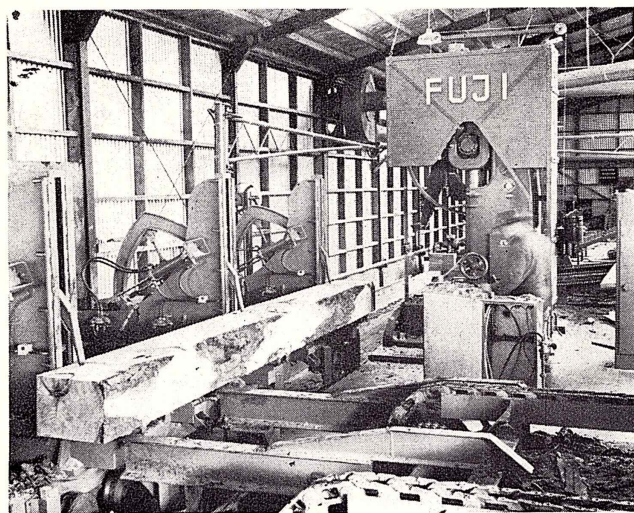
All the timber goes through a sap stain bath and then passes on to a sorting table where it is sized and graded for distribution to the storage and drying yards.

The Niagara company has shown great progress since the days when the timber trams carried loads of logs along the wooden tracks to the mill where they fell under the blow of the steam-driven circular saw. There is an indication too, that it will continue to expand and introduce new machines and techniques to serve the timber industry.

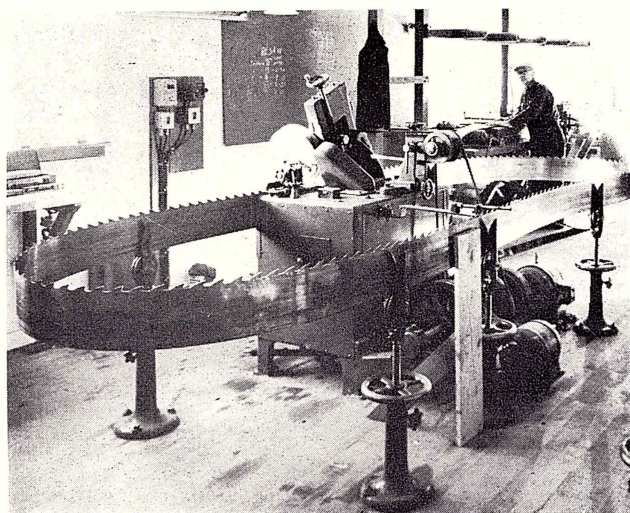
Surveys show that the exports from New Zealand of products based on the timber industry are steadily increasing. This indicates that the demand will continue to increase thus securing for companies such as the Niagara Sawmilling Company a prominent place in future years.

Timber has been used as a building material for centuries and even with the development of materials such as concrete and steel it has continued to hold its place for use in the construction field, and will do so for many years yet. By-products from the forestry industry have placed the sawmilling industry even more firmly and given it a new importance.

The Niagara Sawmilling Co. Ltd has served the area and the timber industry well since its foundation over 30 years ago, and with its modern equipment and good management forming a sound basis for success, the company will continue to expand to meet future demands.



The log carriage which was developed in New Zealand and which has become the first to be used in the production of sawn timber.



Saw Doctor's Shop.



Poole's stacking yards.

GEORGE POOLE & SONS LTD.

JOINERY AND FURNITURE MANUFACTURERS

92 Yarrow Street

INVERCARGILL

Phone 86-069

PIONEERING the use of advanced techniques in wood treatment and care the firm of George Poole & Sons Ltd, Yarrow St, Invercargill has established a reputation within the industry and with the public as prominent as its towering smokestack in the heart of the city.

This 63-year-old firm has been in the game long enough to know that unless modern techniques of handling, storing and treating timber are used in a highly competitive trade they would not be able to keep among the leaders in the industry. For that's what they've been with (for instance) the use of kiln drying since 1910 (and the pioneering introduction of pressure impregnation treatment plant for sapwood timber. Of course in between there's been a willingness to use or experiment with the latest resins, lacquer units and the like.

Today there emerges a picture of an

up-to-date firm on a site of three acres in the heart of the city capable of handling anything in the processing of manufacturing of wood; of supplying the wants of a massive order or hundreds of units for the massive Manapouri village project or for a wheelbarrow handle; of building the most modern furniture or providing beautiful traditional styles finished in a fashion rivaling the painstaking work of the hand craftsmen — but all with modern machinery.

Craftsmanship is perhaps the key word here. In the maintenance of quality Geo. Poole and Sons have been first and foremost aware that it is the men who count. For instance Arthur Jones, a qualified cabinet maker, has been with the firm for 56 years! Each year he "retires" as he put it recently but each year finds him back at the benches turning out products that reflect his skill

won over half a century of service.

Contributing vitally to the forward look of the firm and yet maintaining links with the past are Messrs Harold and Vernon Poole who occupy the chief executive positions in the firm. Both men are grandsons of the founder Mr George Poole who began the firm on the same site in 1903. Three sons, the late C. H., A. V. and P. A. Poole carried on the business in the second generation. Mr P. A. Poole is retired.

Harold Poole, chairman of directors and assistant manager, is the son of the late Mr C. H. Poole and the managing director, Mr Vernon Poole, the son of the late Mr A. V. Poole.

They have already made plans to handle the expected increase in the business in pacing the growth of the province. Land has been bought near the city to allow room for expansion in addition to the properties bought ad-

jacent to their Yarrow St headquarters.

Both executives' comments are interesting concerning the changes in the trade.

They could foresee the day when the native timbers so taken for granted by the mass of Southlanders would all be gone. Obviously this would lead to the greater use of exotic woods. Treatment was necessary to give these the versatility and the characteristics available with the indigenous woods.

The installation of first one and then two vacuum pressure impregnation plants at the city yard was a great step, a pioneering step forward which has had widespread results. By now most of the uses for timber treated this way are well known. Other firms have followed suit. But to Pooles goes the credit for the initial foresight.

With this mass of equipment and methods of treatment of the raw material Pooles are well equipped to carry out their claim that they can handle "practically every kind of assignment in the trade."

An inspection of the big, well laid out factory gives ample evidence of that diversity. Over 30,000 sq. ft. of space is at present in use.

Traditional hand-finished articles built of oak, mahogany or other imported timbers are ranked with larger orders in native and exotic timbers awaiting shipment to other parts of the province. Beds by the hundred are turned out annually, a toy may be repaired alongside an order (actual) of 300 items for the Manapouri Village scheme. Antique furniture items and their repair is also a feature accepted by the firm notable for its skill over the years in this field. Period furniture is made to order and a skilled French polisher is on hand for the final touch.

In recent years arches for school rooms have become a sizeable line.

So too has the fabrication of laminated wooden beams.

Pooles pioneered this new and, to many architects and woodworkers, exciting refinement. Lamination of multi-sized pieces of wood has lent a new versatility to the treatment of wood enabling strong beams of wood to vie with steel beams. Some of these laminations have been used in Southland halls and their exposed graining and curves give grace to an otherwise prosaic support.

Vernon Poole noted that the new resins have enabled wood to overcome the warping, splitting and buckling apparent in wood in years gone by. Now

this versatile treatment of controlled kiln drying, of lamination and the use of resins has resulted in stability not easily achieved before.

The Pooles have seen some changes in design. Nowadays there is a simplicity and cleanness of line; greater variety in such areas as the kitchen and the attendant increase in the provision of storage and functional units; an appreciation of the fact that the item of made of wood which has a beauty all its own. And meant to be seen.

A short list of the major buildings or projects that Pooles have supplied shows their ability to handle jobs of magnitude. Included are the complete provision of furniture in the Kelvin Hotel, the latest to be built in New Zealand and one of the biggest, Alliance freezing works (also the latest in New Zealand), the Manapouri Village at present being built for the massive hydro scheme there, the Southland Harbour scheme at Bluff, major offices in the city, churches . . . the list is imposing.

But just as important is the concern shown by the firm for thousands of customers with items costing only a few shillings. On this rests much of the goodwill the firm has won.

Mechanical handling aids there are; a double unit for pressure treatment of wood; an up to date layout for industrial efficiency; capacity for mass production if needed. All these things are present at George Poole and Sons.

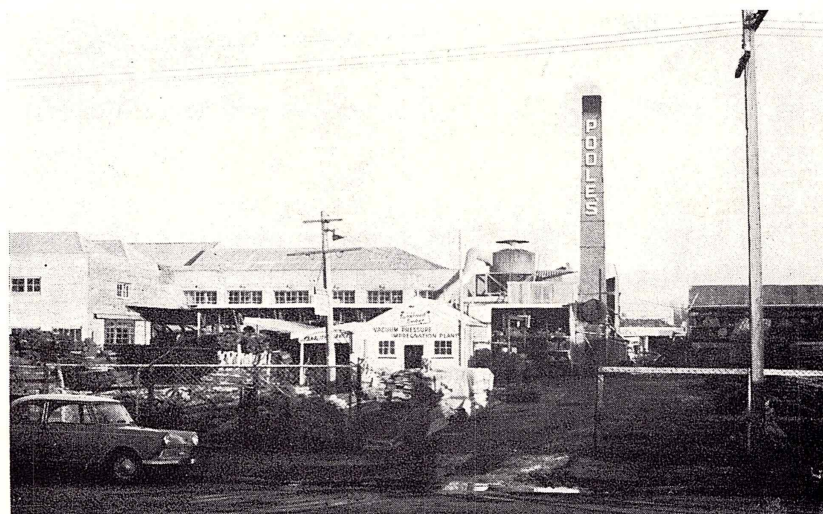
But the greatest strength the firm has is in its reputation built up over 63 years for quality goods and its ability to call on three generations of experience to provide a service to Southland customers of all means.



MR VERNON POOLE

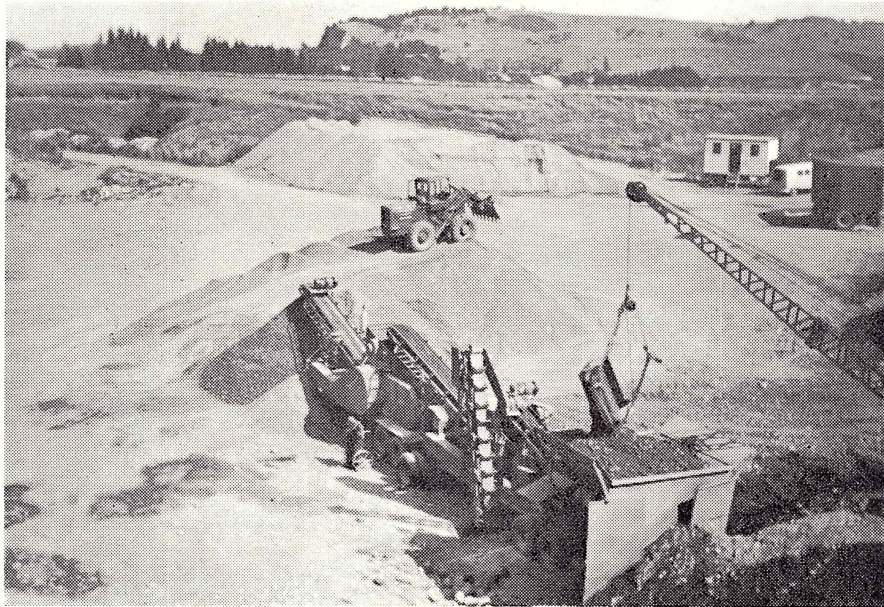


MR HAROLD POOLE



Pooles' 60ft smokestack is a prominent landmark in flat Invercargill's commercial centre. The main factory is on the left with the double wood treatment unit in the foreground. The stacking yards are to the right.

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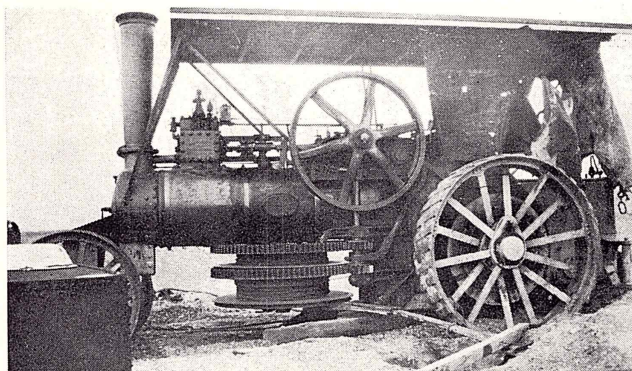
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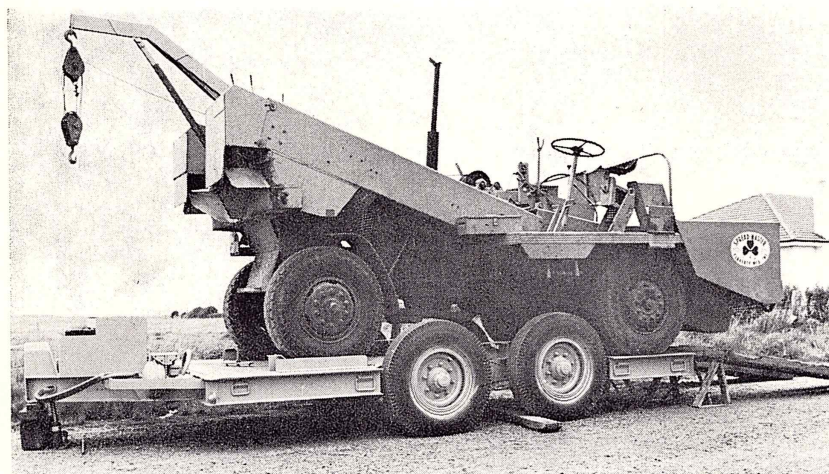
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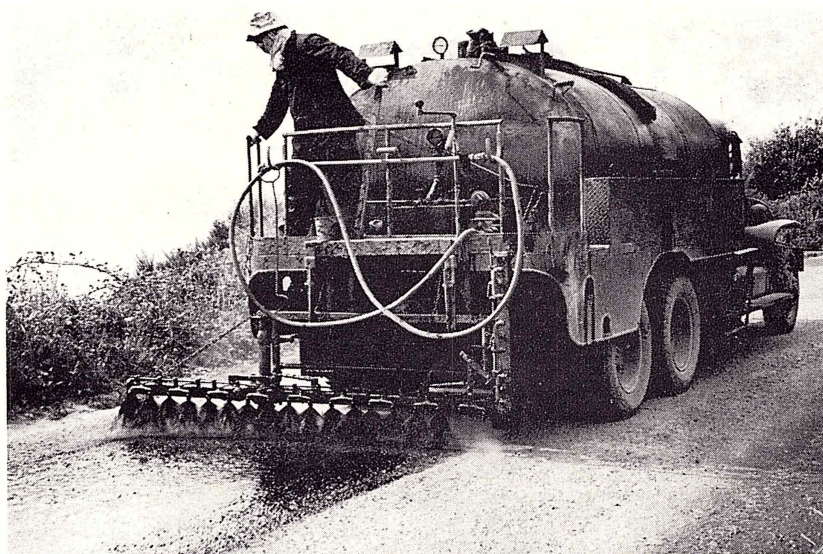


The Fowler steam engine first used for scooping gravel.



ABOVE: The company's Flaherty
Spreader.

RIGHT: The Roscoe Bitumen Sprayer
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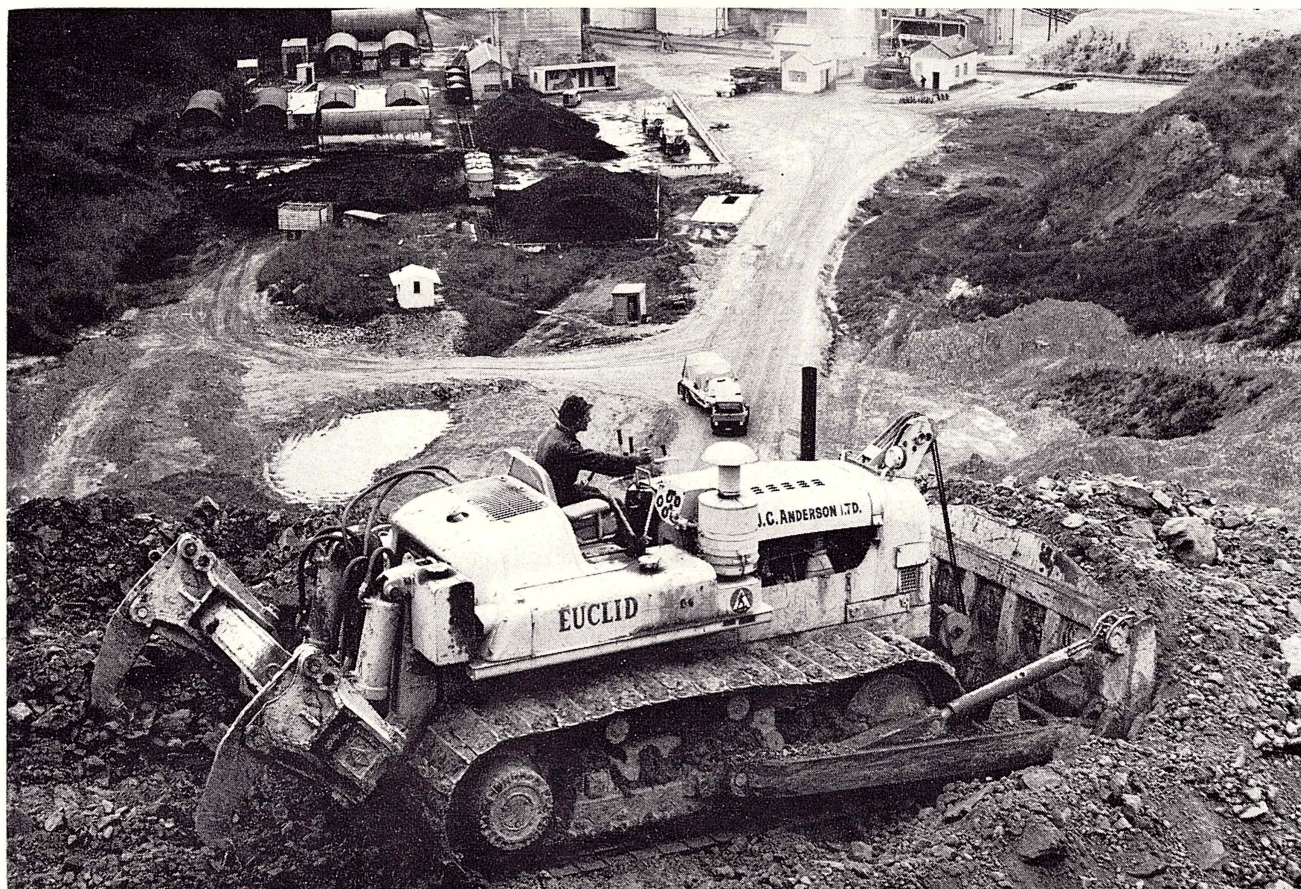
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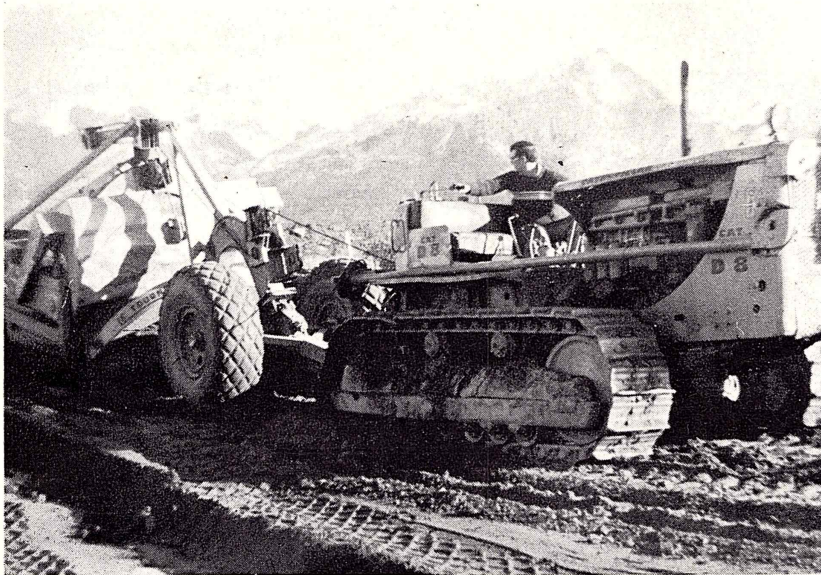
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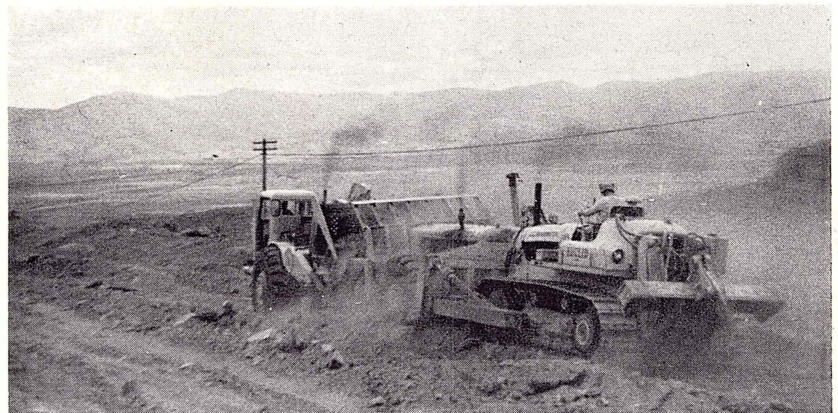
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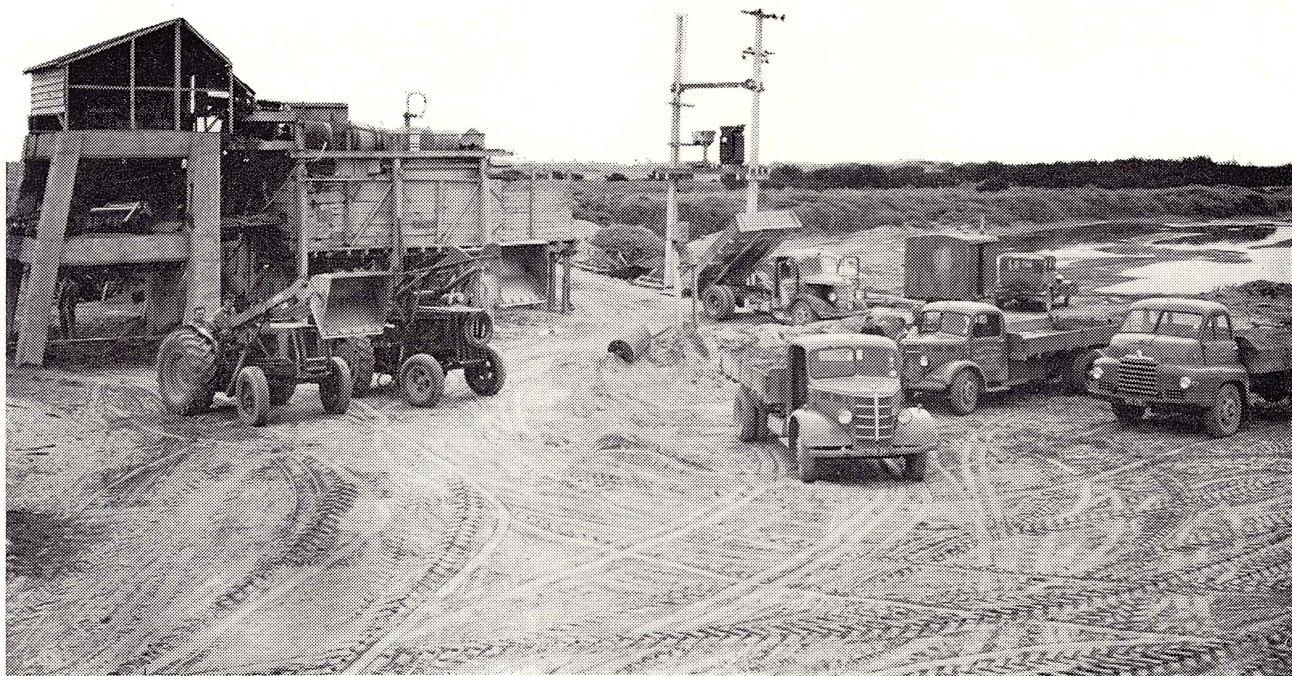
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FROM humble beginnings in 1948 when much of the sand and gravel loading was carried out by hand to the up-to-date operation which includes some of the most modern machinery in the country is the story of the Southland Sand and Gravel Company which, in a very real sense, is providing the foundations for many of the province's biggest projects. Their fleet of 20 trucks, four loaders, and other specialised units is a major one in the province's building programme.

Of course, the sand and the gravel are still the same. But gone are the traction engine and four vehicles which provided the basic equipment for the original company set up by eight returned servicemen at Oreti beach, seven miles from the city. The eight working directors "got stuck in" to make the business pay. This is the term used by the current manager Mr H. K. Robinson, the only survivor of the original eight active in the firm.

When the building boom, powered by

the high wool prices of the early 'fifties, hit the province, the tiny firm with its battered equipment was forced to expand or allow the trade to go elsewhere. Expand they did. But the work was hard, with the veterans hand-shovelling when the machinery broke down, and working from 7 a.m. until 10 p.m. carting material for the fast-growing suburbs in the city. Most of these new houses were being built in the paddocks that seemed to be acres and acres of mud, recalled Mr Robinson.

But this hard work built the firm which had an eye to the future.

In fact, Mr Robinson preferred to talk about the present. And this was a picture worth painting.

The firm still operates in the same locality at Oreti beach where plant has been modernised so that the shovel is something that's carried around for the look of the thing seemingly. Machines do the loading, the excavating, the mixing — the lot.

the firm has meant that a mechanic is now employed full time at the headquarters in Ayr Street.

Recent Large Contracts

Among the bigger contracts the company has carted to in the recent past have been the new seven-storey Kelvin Hotel, J. E. Watson's building which required up to 200 yards a day, and the massive acre and a-half Empire Forwarding Company building which used a novel method for the foundations.

These were built by pouring gravel into trenches 11ft by 7ft wide and vibrating the whole mass. This was a busy cartage contract for the Southland Sand and Gravel Company and was carried out because of the size and capability of the firm.

Mechanical Handling

Among the changes seen by Mr Robinson over the past 16 years have been the increase in mechanical as compared with manual handling; the absence of "rush" times (at Christmas and Easter) because of the expansion of the pre-mixed concrete; the increase in use of this certified concrete by builders; the improvement in quality of concrete; the greater knowledge there is about the properties of sand and gravel.

Twenty trucks — eight are equipped with concrete agitating units — four loaders, two excavators comprise the core of the mobile plant of the firm.

Market for Stones

One of the most unusual and interesting developments in a business that would appear to be pretty prosaic is the recent opening up of a market for stones!

White stones from inland Southland are at present being shipped by the firm to North Island markets. Gravel is brought to the Oreti plant, washed and graded for despatch by the rail ferry or coastal shipping. This trade in the multi-hued stones used apparently for facing is a continuing one since started about ten years ago. Screened aggregate gravel, suitably washed and processed, has taken on a new charm in the north as a result of the enterprise of the Southland Sand and Gravel Company's operations.

Like so many other Southland firms the company has its share of long-term employees. Graham McAra has been with the firm for 15 years of the 18. Others have been working for them for up to ten years.

Branxholme Gravel Co. Ltd.

Expansion in the concrete business saw the setting up of a new semi-automated plant at Branxholme. The Branxholme Gravel Co. Ltd, on the banks of the Oreti River, which is the main source of supply for a large firm of pre-mix concrete. Both the Oreti and Branxholme plants turn out monthly more than 5000yds of concrete gravel, screened gravel, plaster and concrete sand and basecourse and topcourse for roading work. Full facilities comparable with any in the country are in operation at both units. These have been added to almost yearly.

Feature item at the Branxholme plant is the most up-to-date "flying fox" in the country. This is a giant aerial scoop

mounted on a 110ft steel mast. It has a drag of 12 chains and is fully automatic. At least the only thing the operator has to do is to press a few buttons! This has proved a great boon, said Mr Robinson.

The supply of gravel and concrete ingredients to the pre-mix factory has meant the Southland Sand and Gravel Company has broadened its fleet's capabilities considerably. Some of the trucks are fitted with special concrete carrier units which can carry up to three yards of mixed concrete in a load. For this a licence for 12 tons is needed, explained Mr Robinson. But the average call is still for four yards of concrete gravel. It has been this for years. Expansion of

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Sealing around band rotunda at Queen's Gardens, Invercargill

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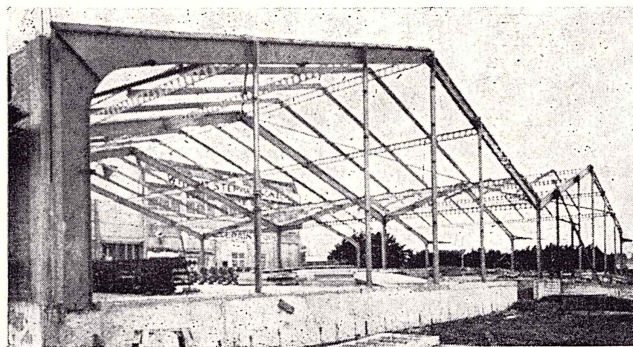
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Structural steelwork carried out by Geo. Wilson & Sons Ltd.

NEVER an idle day in all the years of his business. That is the success of George Wilson and Sons Ltd, the Invercargill firm of general and hydraulic engineers.

It is not so unusual for an Invercargill concern to be kept going full time, but it is perhaps unusual in such a highly competitive field and still more so considering that the firm was established only 15 years ago, by Mr George Wilson senior.

The situation is evidence of the workmanship and versatility of this business. Types of work undertaken include structural steelwork, lime works, plans and machinery for driers, pulverisers, screening plant, conveyors, bucket elevators, winches, gravel screen, cement and lime silos, tanks of all descriptions, including petrol installations for oil companies, bulldozer blades, topdressing aircraft hydraulic loaders, etc.

Current jobs include the production of coalmine tubs for the Ohai mines. This firm is responsible for the first concrete-cutting saw to be made in Southland, and has a fluid over-drive powered by a Wisconsin engine of about 20 horsepower. The imported cutting saw has a diamond studded edge and will cut two or three inches through

concrete. The saw will enable a continuous run of concrete in contrast to the conventional laying in of blocks.

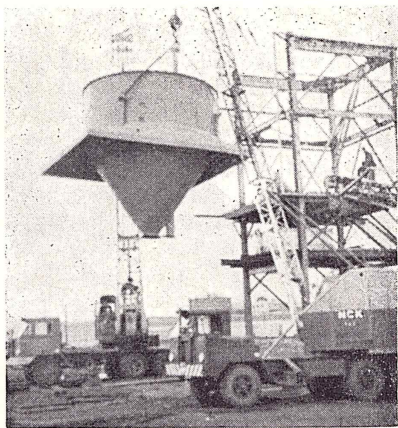
Another of Wilsons' specialties is the manufacture of steel bridges. Examples of their work in this field may be seen at the Wairaki stream in Wallace county where they constructed a bridge 312 feet in length.

A large steel store consisting of two spans each 120 feet long and 54 feet wide has been built for Fletchers, and another for the Independent Grocers' Alliance.

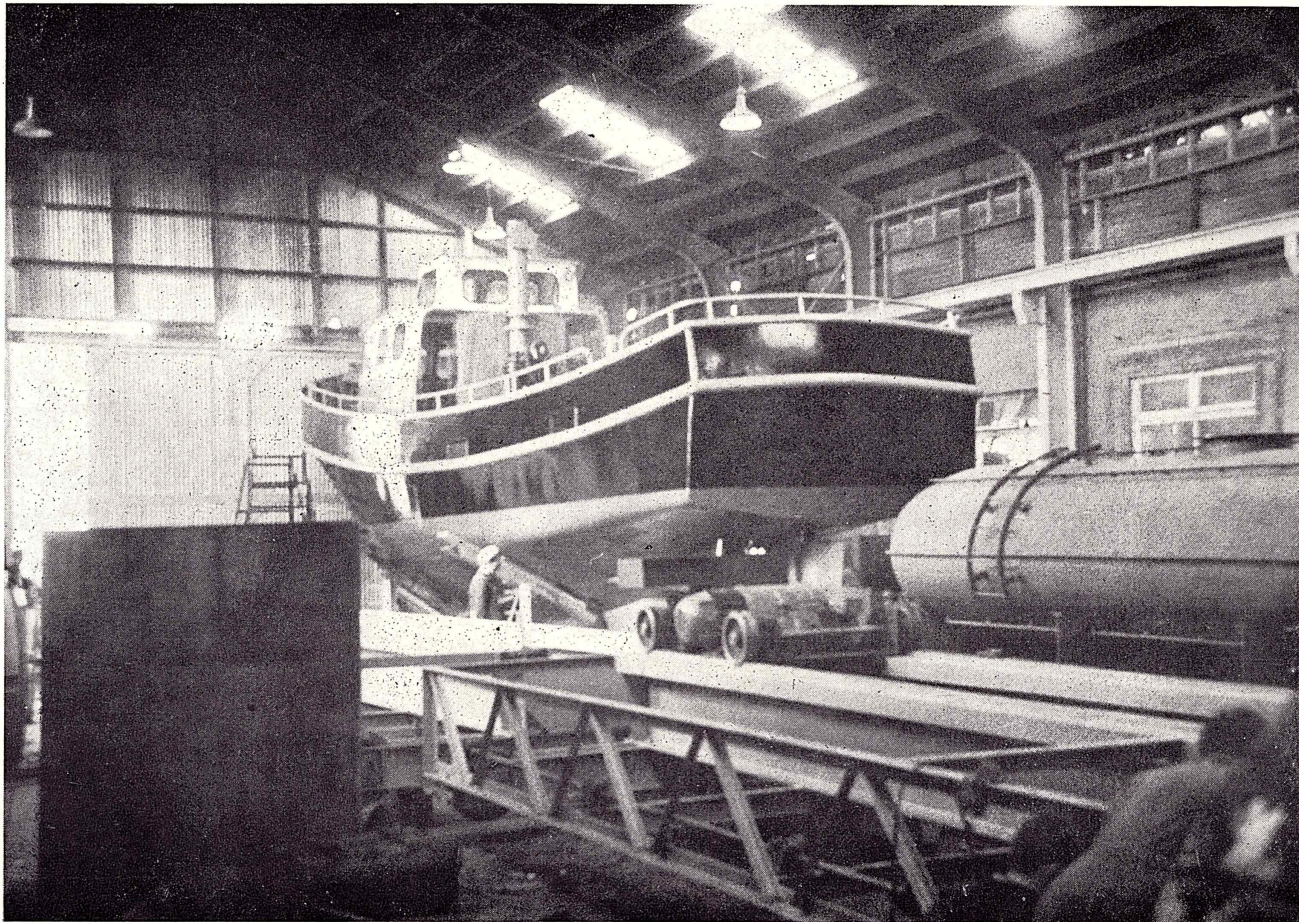
The bulk handling of tallow in Southland has meant big work orders for Wilsons. They built two large tanks for the Southland Butchers' By-Products Company and three for the Alliance Freezing Company. Each of these tanks has a 100-ton capacity.

This thriving business has expanded from small beginnings in 80ft by 32ft premises until today it covers half an acre, and plans are underway for a modern office block. The original staff of three has grown to the present total of 16.

Mr Wilson senior has indeed come far since managing another city engineering firm, and his sons and partners, George and Harold, are set to use to advantage the foundations he has laid.



The company manufactures and erects screening plants, concrete batching plants and steel towers.



A variety of work in the Plate Fabrication Shop.

J. JOHNSTON & SONS Ltd.

ENGINEERS AND IRON FOUNDERS

27 LEET STREET

INVERCARGILL

P.O. BOX 47

PHONE 89-022

IT will generally be recognised that growth and expansion is very desirable to any community, in any country, and right now Southland is no exception.

But participation in the general development demands a detailed development by the individual company too—and in the engineering field J. Johnston and Sons Ltd, have always been determined to see that their own facilities were synonymous with this trend.

The ability to service with "on schedule deliveries" are an all important requirement in any planned expansion, and Johnston's own increased workshop space, plus a continual re-tooling programme, consolidates the policy that clientele may place their orders in confidence and receive quality at competitive prices at the right time.

Plate Fabrication

In recent years plate fabrication has become one of the major specialties of J. Johnston & Sons Ltd and the facilities on hand allow for a wide range of manufacturing to be done.

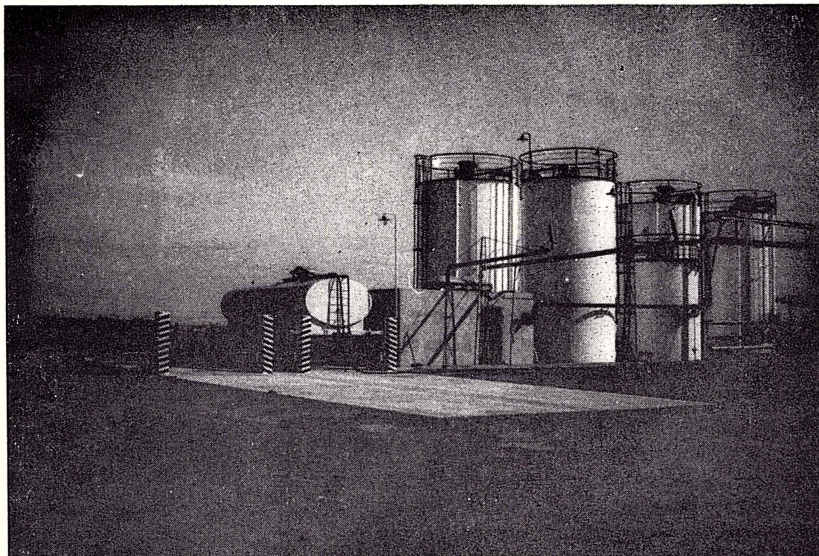
A team of highly trained tradesmen are now almost continually engaged in pressure vessel work covering all sizes, and recently completed what is possibly the longest ever steam pressure vessel to be manufactured in the South Island.

This particular cylinder was 78ft long by 5ft diameter, weighed approximately 15 tons and was certified for 145 p.s.i. (steam pressure) and 20-inch Hg vacuum. The vessel was fitted with an "auto-clave door" at one end, enabling opening or closing to be achieved by one man in a matter of seconds—without effort.

The door is a product of R. J. Murray & Sons Pty. Ltd, of Australia, for whom J. Johnston & Sons Ltd distribute in New Zealand, and is available over a wide range of diameters and working pressures.

Tallow Storage Tanks

In addition to this work much has also been done in tallow storage and over a recent period storage vessels of a total capacity exceeding 1,200 tons have been built and erected by the company.



Tank construction by J. Johnston & Sons Ltd.



Structural steel by J. Johnston & Sons Ltd.

Awarua Acid Plant

Currently, some 200 tons of steel plates are being used in the manufacture of a new acid plant for the Southland Co-op Phosphate Company's works at Awarua, and all vessels apertaining to this plant are now nearing completion.

Steel Fishing Vessels

Fabrication of steel fishing vessels has also been one of the more specialised facets of Johnston's plate and boiler shop, and to date six craft have been successfully launched.

Diversified Activities

The activities of J. Johnston and Sons Ltd, however, are not limited solely to plate fabrication and the company's record is equally impressive in the structural, mechanical, machine shop and foundry divisions.

Major Contract

The importance and competence of these specialised divisions within the framework of this old established engineering works are exemplified with the recently awarded contract from The Barrow Box Co. of Tapanui. The design, manufacture and erection of what will prove to be one of the most modern and comprehensive sawmill and treatment plants in the Otago/Southland area is at present being undertaken by J. Johnston & Sons Ltd.

In addition to the sawmill machinery, conveyors, etc., this work has included the design and manufacture of steel portal framed buildings, a five-ton O.H.E.T. crane, boilerhouse installation and ancillary steam and air services.

Considerable Versatility

The comprehensive range of plant at Johnston's makes for considerable versatility and enables the company to engage successfully in a wide range of competitive manufacture.

At present the works are tooled up to produce in batch numbers a quite wide range of equipment including hydraulic angle dozers for Fiat tractors; Gibson power feed breast benches (made under licence); 3-Zone field tile dryers; fishing vessel hydraulic deck machinery; freezing works and papermill machinery.



The longest length of continuous flat roofing produced by Owen Marshall Ltd.

OWEN MARSHALL LTD.

PLUMBERS AND GENERAL SHEET METAL WORKERS

ORIGINALITY and modernity could well be the twin key-notes of Owen Marshall the founder of the well known Invercargill firm of Owen Marshall Ltd.

The originality is evidenced all around from the modern looking headquarters building which ranks among

the most efficient in Australasia and in the patents and modifications Mr Marshall has made or taken out on a variety of machines manufacturing plumbing supplies.

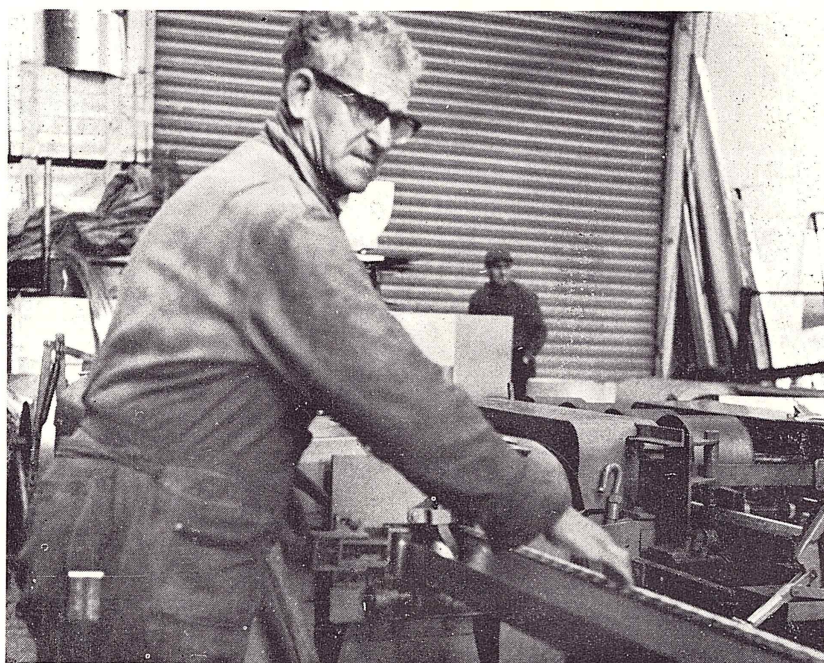
The modernity is seen in the layout and the willingness of the management to keep abreast of the latest techniques

from overseas. For in the large (132ft by 66ft) plant are some of the latest labour-saving tools and most efficient production methods in the business.

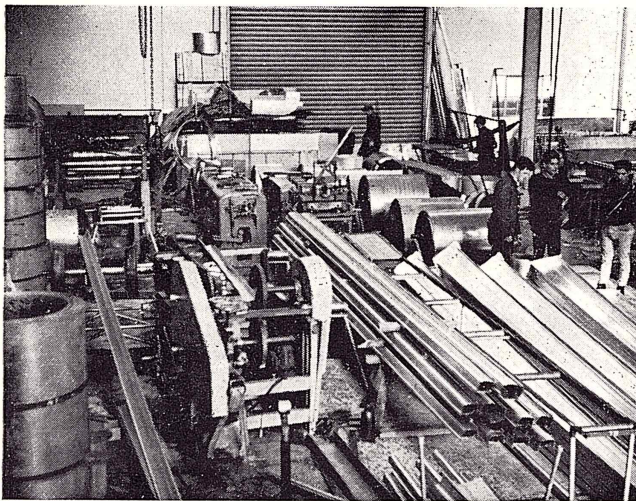
Without doubt the results that catch the eye are the continuous processes for manufacturing spouting, flat roofing and downpiping. A marriage of ideas on Owen's side and engineering techniques on his brother Noel's part has resulted in modifications and patents being taken out on some of these proven production techniques. This is a search that still goes on by the brothers. As Owen puts it, "I tell him what I have in mind and he constructs it!" And what makes this more interesting is the fact that this co-operation comes from Noel who has no other connection with the firm.

Pride of place in results to date is the 97ft 2in. length of flat roofing built for the new Invercargill Wool Exchange building last year (1965). This was the length required for the job and that was what Owen Marshall Ltd were able to provide. Of course the firm could have had something even longer in any of the continuous processes but transport difficulties would be a limiting factor.

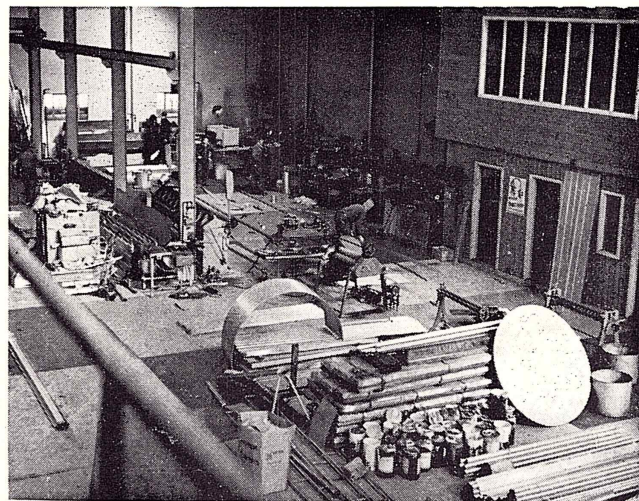
Owen Marshall began his plumbing business in Invercargill in 1939 with himself and one apprentice. Almost straight away he had to close down because of war service and restarted again on return



Charlie Pearson, one of the experienced workers at Owen Marshall Ltd, guides a length of spouting from a continuous processing machine that was partly developed by the firm's founder. Any given length may be manufactured using this machine.



Long lengths of spouting and flat-roofing await despatch after processing in the machines in the background. Rolls of metal at right rear await fabrication.



A section of the interior of the main workshop of Owen Marshall Ltd. Staff facilities are on the right.

home in 1945. Late that year he began to pick up the threads and expansion since then has been rapid. In addition to plumbing, sheet metal as described above is also manufactured. Recently the firm has moved into the field of PVC plumbing supplies.

The modern factory and office in 129 Don Street is a light airy building with ample natural light for the staff. This has grown to 27 today. Of these 15 are outside on a wide variety of jobs. For as Owen Marshall says "we'll change a tap washer."

At the other end of the scale some of the biggest buildings in Southland have been equipped with Marshall products and skill. Among these are the biggest freezing works in New Zealand

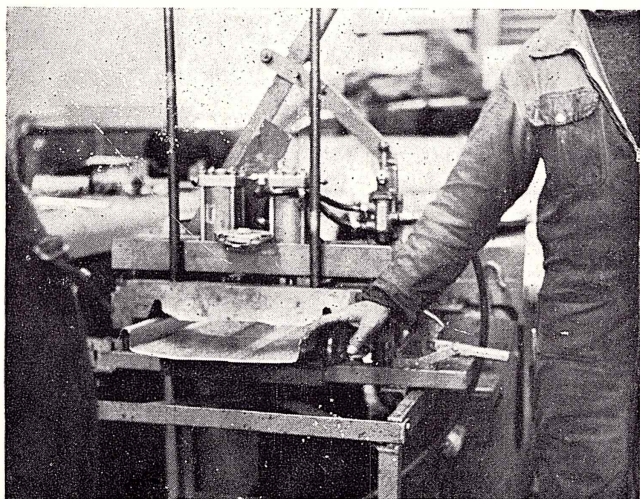
built at Lorneville, near Invercargill, for the Alliance Company; the Kelvin Hotel, largest in the South Island, opened in 1965; the brand new Menzies Building, the largest office building in the city; Dalgety's wool store covering an area of five acres; plus alterations to the four freezing works in Southland which have had to expand to meet the lamb-kill explosion that is pacing the province to the top in this field.

Most of the output on the sheetmetal side is absorbed in Southland and South Otago although some units have been sent as far away as Timaru. A Marshall-designed machine has been sold widely in New Zealand and in Australia for the continuous metal processing.

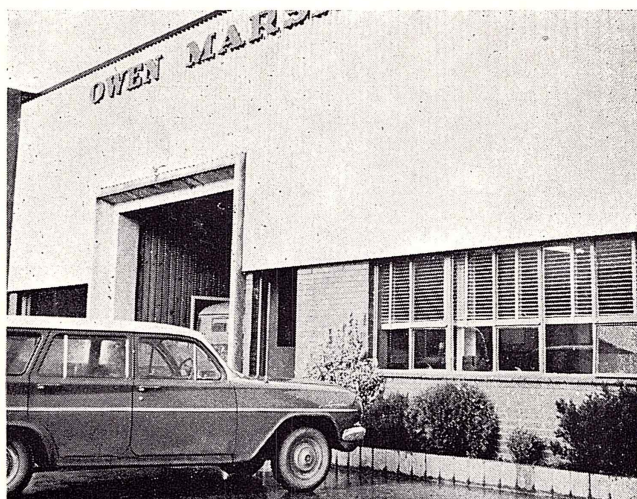
Apart from pioneering the use of con-

tinuous sheeting, patenting and modifying production machines, Owen Marshall Ltd has also pioneered the use in Invercargill of copper for use in sanitation units. In addition another patent in the making of brackets for spouting has also been developed and registered.

Trips overseas have reinforced the opinion that New Zealand is at least five years ahead of Australia in plumbing techniques. With an inquiring mind Owen Marshall intends to keep his firm right at the head of the industry by developing as many different processes as possible. Talks to his men after these trips keep them aware that there is much development going on everywhere and that the latest ideas are being used right in Invercargill.



A sheet of flat-roofing emerging from a continuous process machine with Charlie Pearson testing the smoothness.



The modern-looking frontage of the factory which was erected in 1960 in Don Street. Owen Marshall Ltd, 129 Don St, Invercargill. Phone 82-579.



The present premises of Wilson Bros. Ltd in Leet Street, Invercargill.

WILSON BROS. LTD.

ENGINEERS

LEET STREET - INVERCARGILL

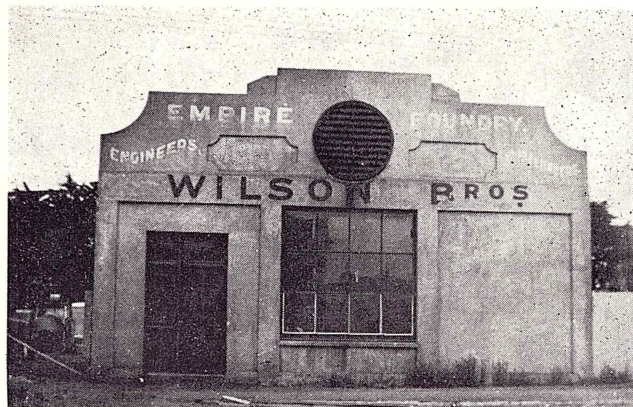
P.O. BOX 466
PHONE 89-076

Dealers:

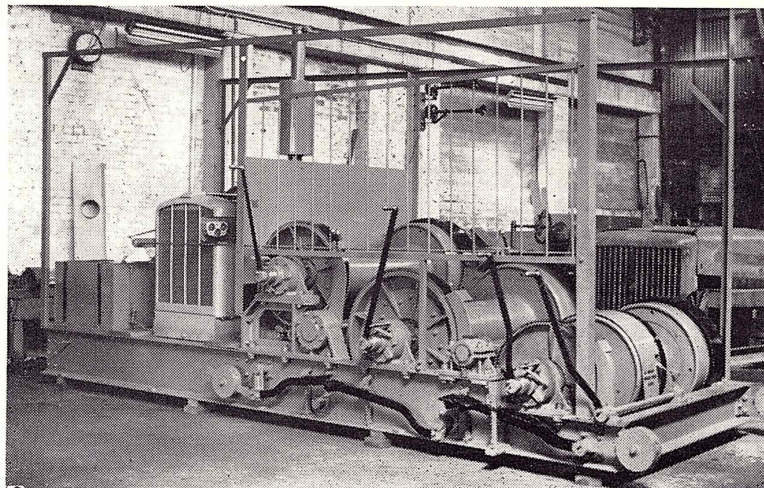
Euclid Earthmoving Equipment
Detroit Diesel Engines
Track Marshall Crawler Tractors
Scoopmobile Loaders
Hino Trucks

Stockists:

SKF Ball & Roller Bearings



ABOVE: Premises as at 1944.



LEFT: Log hauler manufactured by Wilson Bros. Ltd.

SPECIALISTS in the manufacture of saw-mill equipment, including —

AIR AUTOMATED LOG CARRIAGES
SAW FRAMES
BREAST BENCHES
CONVEYOR SYSTEMS etc.

A MAJOR contribution to the development of Southland during the past half-century has been made by the Invercargill engineering firm of Wilson Bros. Ltd.

The firm was founded in 1919 with a staff of only three men. Over the years the company has adapted itself to the changing requirements of industry as the area developed and its economy expanded.

The company designs and manufactures machinery for sawmills, freezing works, lime works, coalmines, joinery factories, etc. It also produces ballbearing housings, guider rollers, conveyor rollers and various other small components. The manufacturing side of the business includes in addition, the well-known Wilbro brand of machine tools as well as jigs and other various tools and fixtures.

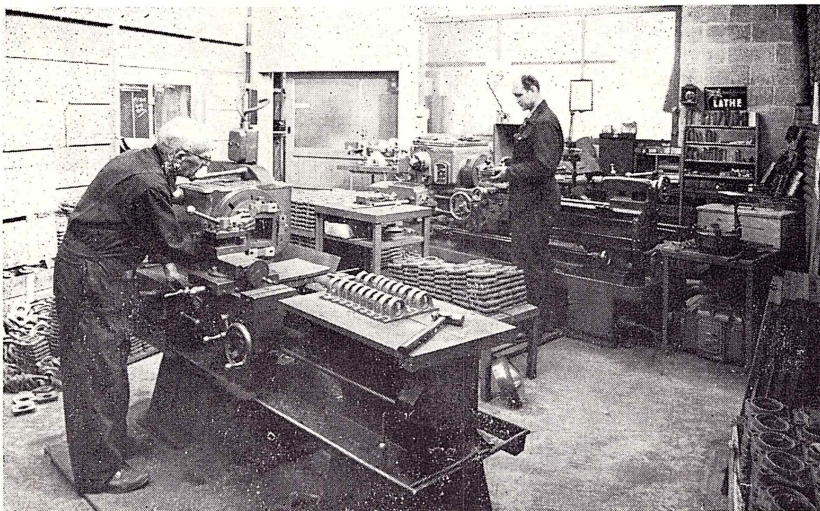
It meets the requirements of local industry by designing and manufacturing logging haulers for the sawmilling industry. For freezing works it produces casing machines, skin washers, head splitters, etc. For gravel plants, cement works and coalmines the company produces vibrating screens and conveying equipment.

Wilson Bros also hold a number of valuable agencies for the sale and servicing of Detroit (G.M.) Diesel engines, Euclid earthmoving equipment, Track Marshall crawler tractors, Scoopmobile bucket loaders, and Smith (Rodley) excavators. They are stockists of SKF ball and roller bearings, Tufnol pumps and pressure gauges, and Pongress air equipment.

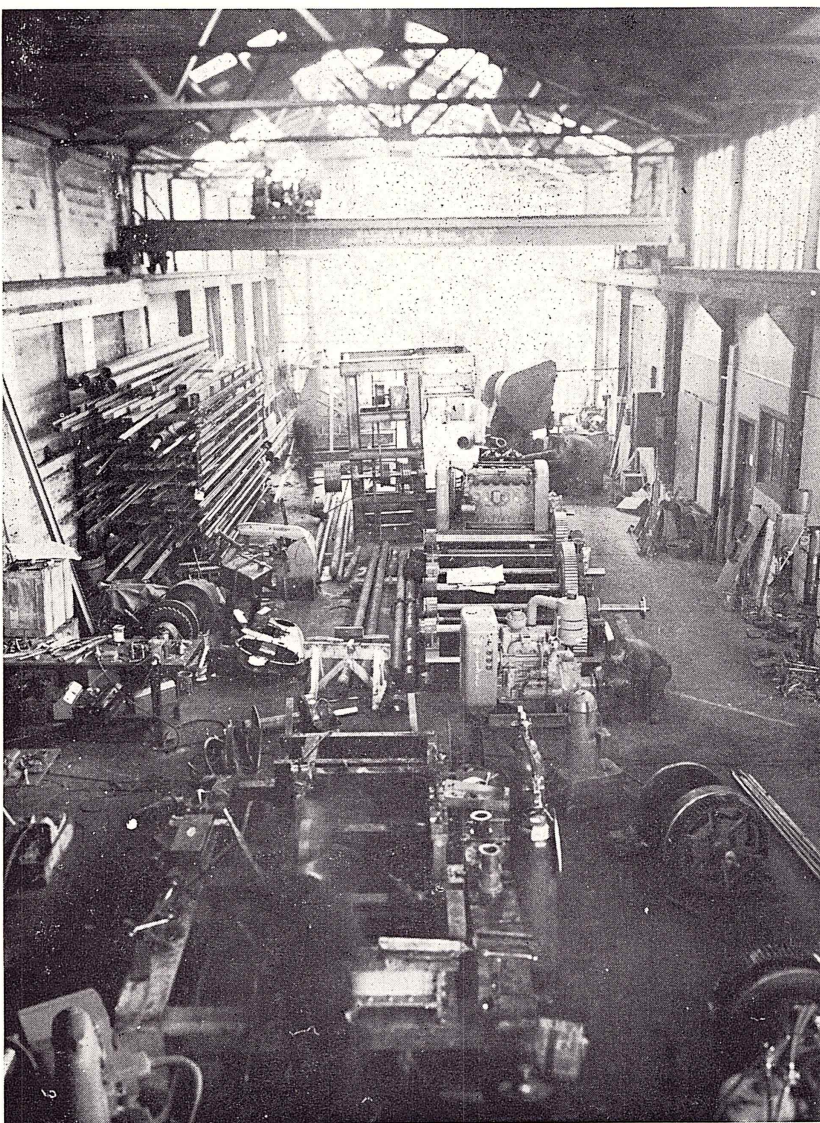
Over the years the premises have grown on the present site from a 1500 sq. ft shed to a modern, well-equipped workshop covering 17,000 sq. ft. The staff employed now totals 35.

The company today is developing along the lines of the manufacture of machine tools and components. It has a modern production foundry and supplies air power equipment to all forms of industry.

Recently the company was granted a licence to manufacture automated sawmill equipment for an overseas firm.



ABOVE: Production shop lathes. BELOW: Fitting bay workshop.



SILVER DOLPHIN STAINLESS STEEL PRODUCTS

MANUFACTURED BY

S - I - D - A

INVERCARGILL

NEW ZEALAND

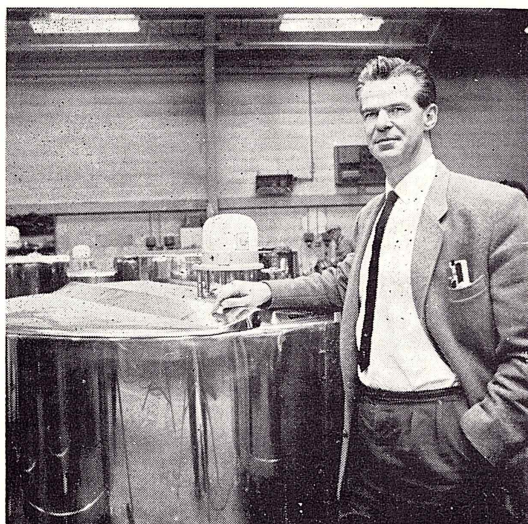
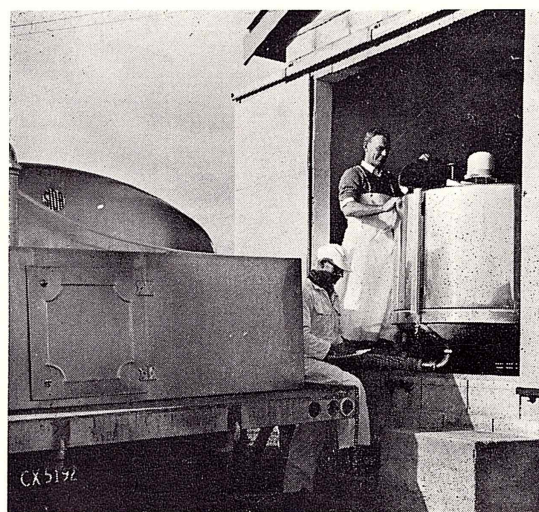
Originally established in 1925. The South Island Dairy Association Limited (S.I.D.A.) began at that time to cater for the sheetmetal needs of the Dairy Industry with a staff of three men.



Expansion of this service soon called for larger premises and in 1946 this building, appropriately a disused butter factory, was duly converted to sheetmetal fabrication.

Brass, Copper and Tinned Steel were the metals of the fabricator when S.I.D.A. first began servicing the Dairy Industry and solder and rivets were the common means of joining sheets.

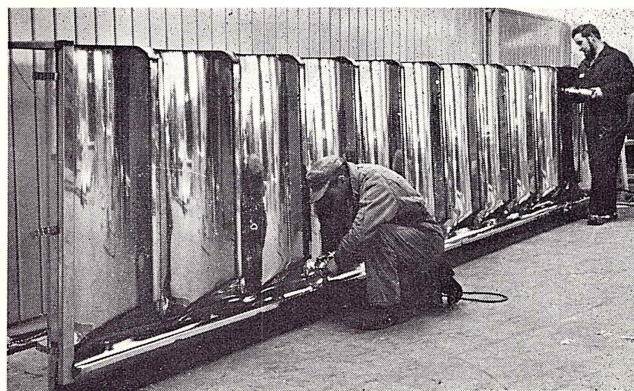
Gleaming hygienic Stainless Steel has taken over totally in the Dairy Industry and this scene of Stainless Steel tanker and Stainless Steel Farm Vat alike are typical of the class of work S.I.D.A. is producing for the Dairy Industry today.



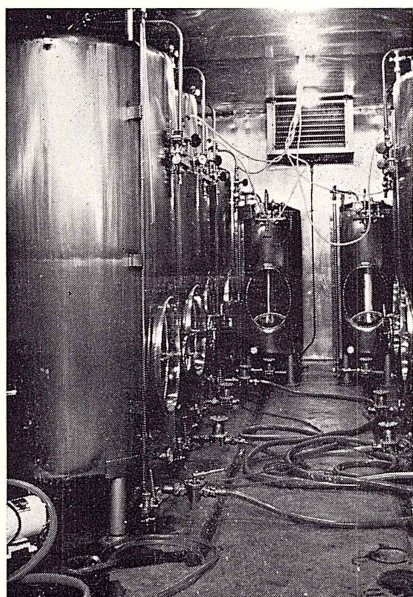
Craftsmen skilled in Stainless Steel Fabrication for the Dairy Industry have turned readily to the fabrication of commercial and industrial Stainless Steel products.

Mr G. H. Hogg, a man with considerable commercial Stainless Steel experience guides this team cautiously, for he is a Scot, in the position of Workshop Manager.

Commercial Stainless Steel Supplies for plumbers and contractors now form a major part of the business of S.I.D.A. and here we see two of the men working on a stall urinal for a hotel. The Silver Dolphin trade mark is becoming well known in many places.



Industrial Tanks and Vessels in Stainless Steel both plain and refrigerated are being enquired for from S.I.D.A. by manufacturers in New Zealand and around the world. These beer cellar tanks are typical of the class of work being done.



S.I.D.A. Have Reached Perfection in Dairy and Industrial Stainless Steel fabrication even on world standards and are now rapidly gaining a share of the competitive export market.

Here we see the company's General Manager, Mr R. A. Greenfield, participating in a Trade Mission in the South Pacific.



In Marked Contrast with the old butter factory, these modern new premises of S.I.D.A., part of which are shown here were doubled since being completed in 1965, and are still inadequate. Plans are being prepared to double the premises again to cope with the demand for Silver Dolphin Stainless Steel products being marketed by this forceful and vigorous organisation.

SILVER DOLPHIN STAINLESS STEEL PRODUCTS BY S.I.D.A.

HIGH above the ships at berths on the new island harbour at Bluff, tower the all-weather meat loaders, which have aroused interest and comment from visitors and travellers throughout the world. These loaders were engineered to cope with the expansion of industry in Southland, and when expansion in city or province takes place so must business expand.

One of the firms which shared in the achievement of the all-weather meat loaders was J. K. Stevenson Ltd, structural steel and general engineers of Invercargill. This firm had the task of

building the travelling gantries and other works associated with the loaders. The job demanded a high degree of workmanship which was shown by the fact that all electric welding was subject to X-ray examination before being accepted for the contract.

The story of J. K. Stevenson Ltd has been one of the steady and at times rapid expansion. From small beginnings in a blacksmith shop at Waianiwa about 10 miles from Invercargill, it has grown into two self-contained branches of business, the structural steel division and the general engineering workshops.

It was founded in 1905 by the late J. K. Stevenson, father of the present general manager, Mr R. E. Stevenson. J. K. Stevenson was a "smithy" who later branched out into cycle repair work and then opened a garage at Waianiwa.

Foreseeing better opportunities in Invercargill, he moved in 1935 and began the manufacture of the well-known "Munro Triumph" farm topdresser and lime sower. Throughout the ensuing years, thousands of these machines have been sent to all parts of New Zealand, and shipments have been exported to South Africa, Australia and the United Kingdom.

The manufacture of the machine was carried out by mass production methods, using jigs for making parts and assembling which was a departure from the then current production methods in New

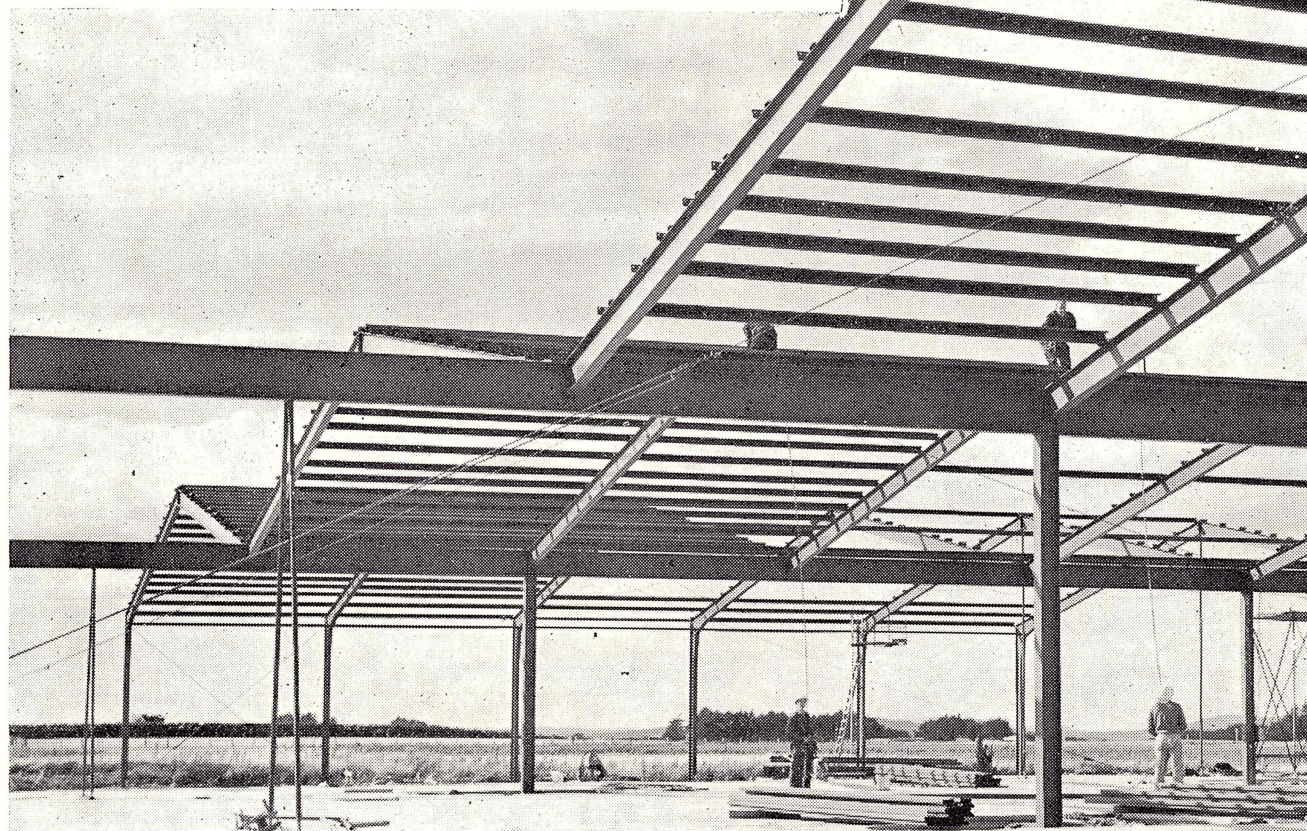
J. K. STEVENSON LTD.

SOUTHLAND'S EXPANDING
STEEL INDUSTRY

Cnr. Kelvin and Spey Streets

Phone 87-096

Dalgety's 15-acre wool store at Lorneville. J. K. Stevenson used 316 tons of steel to complete this job.



Zealand and was probably the first time that the mass produced technique was used in the province.

By now well-established, the firm had bought land on the corner of Spey and Kelvin Streets by 1938 where a two-storeyed building was constructed which today is used as the head office and for lighter types of engineering work.

This shop is used for fitting and turning, maintenance repairs and plant fabrication of metalwork, steel stairways, wrought-iron work and the manufacture of the Munro topdresser. Plant includes lathes, drilling machines, welding and gas cutting machines, steel shearing and punching machines.

From 1940 onwards the firm made the decision to branch out into structural steel work, a decision which has resulted in rapid expansion.

With the increased business, the old premises were outgrown and by 1958 a new quarter-acre building was erected on the corner of Deveron and Spey Streets. The installation of heavy overhead crane gear in this building allowed larger types of structural steelwork to be handled.

One of the major contracts completed from this building was more than 90 per cent of the structural steelwork for the Alliance Freezing Company's works at Lorneville. The total amount of steelwork involved exceeded more than 800 tons. Steel for the new boning room at Makarewa freezing works and for the fertiliser works at Awarua was also handled at this stage.

During this period the popularity of structural steel for commercial building was increasing rapidly because it enabled speedier construction, lower costs and an increased amount of floor space available by the use of portal frames and other designs of steel structures. Today it can safely be said that the great majority of commercial buildings use this method.

The firm quickly outgrew its Spey Street building and in 1960 bought 1½ acres of reclaimed land in Mersey Street. A new building covering 19,000 sq. ft was built, and is considered by visiting consultants and engineers to be one of the best workshops of its type in the Dominion. The building is serviced by two overhead cranes, giving unrestricted floor space of 265ft by 50ft. The capacity of the cranes is eight tons.

At the present time an extension to this workshop is under construction and will give a further 8000 sq. ft of floor space serviced by a new overhead crane of 5-ton capacity.

One of the first major structures completed at this workshop was the travelling gantries for the metal loading projects at Bluff. The job contained over 200 tons of steelwork and each gantry measured 140ft long by 14ft high by 14ft wide. Made in three sections, the heaviest section weighed more than 18 tons.

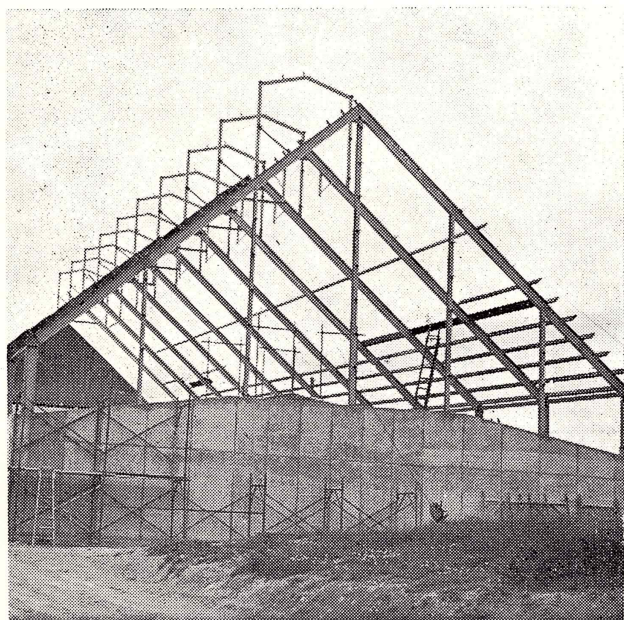
Fabrication of the five gantries extended over a period of 11 months and gave continuous employment to ten

men. The firm also built rail tracks for the loader contract and removable steel hatches for the roof of the transfer shed.

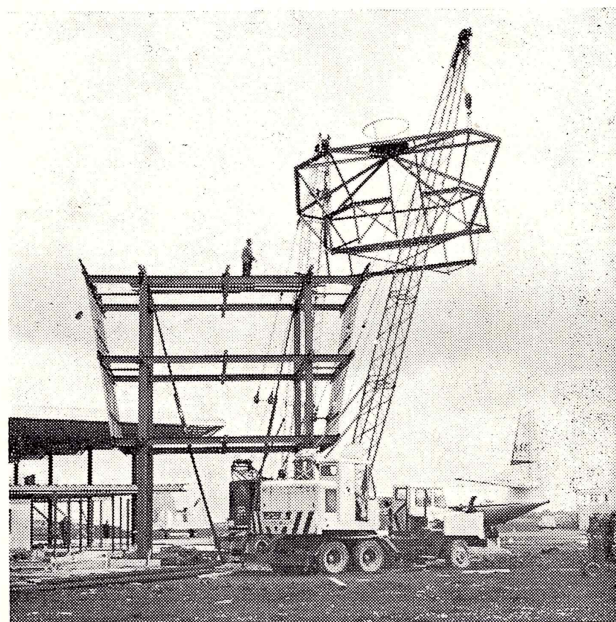
Other large Southland projects with which the firm has been associated were the structural steelwork on the Dalgety and N.Z. Loan Company Ltd's five-acre wool store at Lorneville, the terminal building and the control tower at the Invercargill Airport, the multi-storey pre-package meat block for the Southland Frozen Meat Company at Makarewa, the Glengarry Tavern and the Waikiwi Tavern for the Invercargill Licensing Trust.

The £9 million-plus tailrace contract at Manapouri and Deep Cove for Utah-Williamson-Burnett has included large contracts for the firm with prefabricated steel buildings, part of the rail tracks and switching gear for the Jumbo drilling rig and muck trucks, the permanent steel gangways for shore-to-ship access for the Wanganella, and the Lyvia River bridge. This bridge is a friction grip tensile bolted design involving 52 tons of steel and has a carrying capacity of 100 tons.

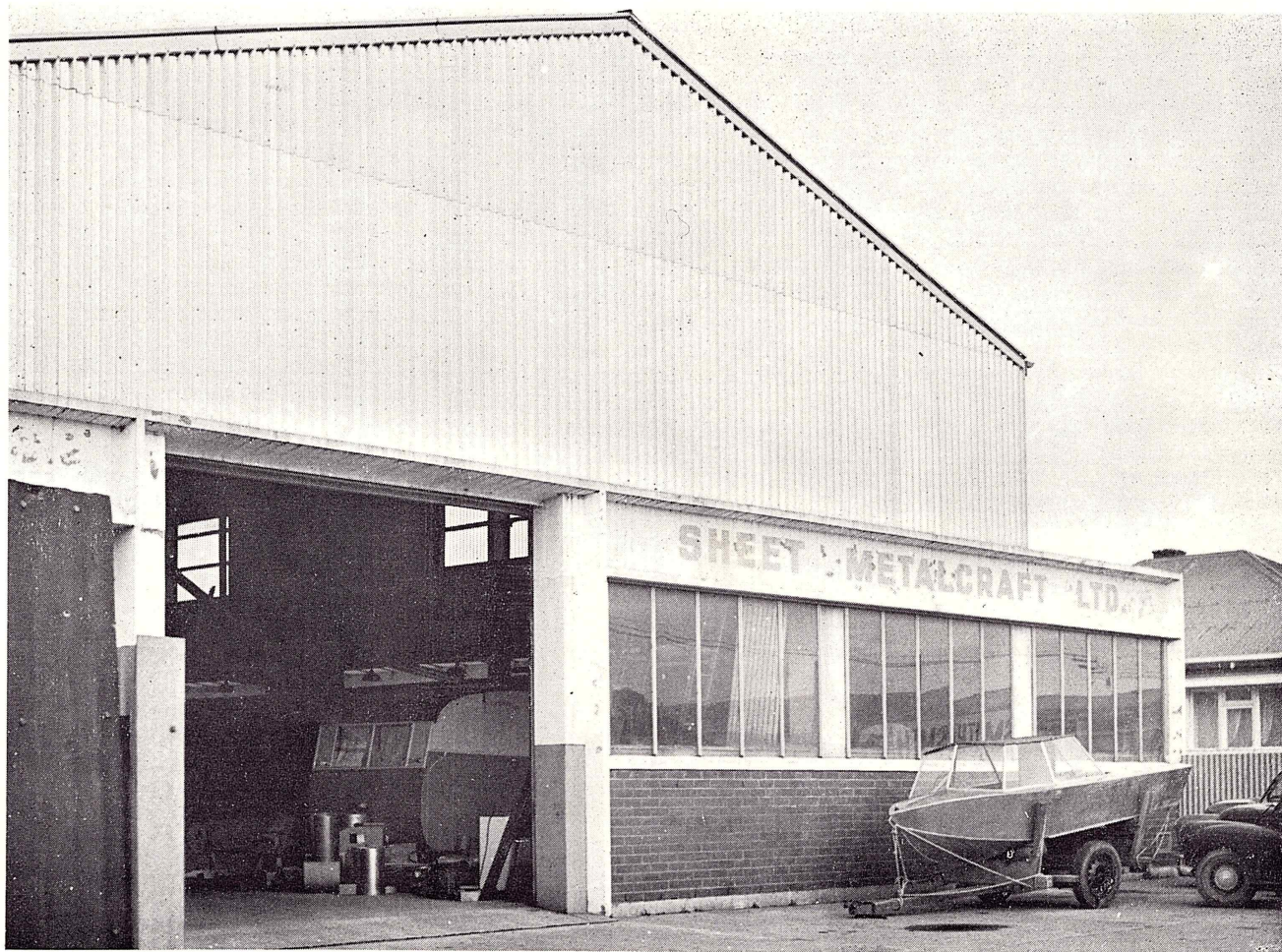
Present day production from the Mersey Street workshop amounts to about 1500 tons of steelwork a year. The firm employs more than 50 men in its steel and engineering departments. Among the highly qualified members of its staff are the general engineering manager, who has had more than 20 years' service. A large percentage of the staff has served with the firm for more than 10 years.



Steelwork nearing completion for the fertiliser works at the Southland Co-op. Phosphate Co. at Awarua.



A crane lifting into position the last portion of steelwork for the Invercargill Airport control tower.



Exterior of Sheet Metalcraft, Liddell Street, Invercargill. The works are large enough to handle jobs of massive size.

Sheet Metalcraft Ltd.

General Sheet Metal Workers
Ventilating and
Air Conditioning
Aluminium Fabrication

89 Tweed St, Invercargill

Phone 6315

THERE'S nothing tinny about the growth of the business of Sheet Metalcraft in Liddell Street, Invercargill.

It's been a case of steady and progressive growth for Mr N. Speirs. As Southland has progressed his firm has grown with it.

He began his sheetmetal business 12 years ago with three men. Now he has seven working in a fine new workshop built three years ago.

As with most other Southland secondary industry, Sheet Metalcraft's main business is linked with agriculture.

A lot of work is done for the freezing works. Articles such as offal fluming are produced for this industry.

And directly for farmers Sheet Metalcraft makes objects such as silos and bulk wheat handling equipment.

The wheat silos have become a fairly big line since the boom in wheat cropping in the deep south.

The silos are made of galvanised steel

and the biggest hold 100 tons of grain. These are 32ft high and 16ft in diameter.

In the non-agricultural lines one of Sheet Metalcraft's biggest products is a line of metal tilt-up doors for garages.

Other products include exhaust and dust extracting schemes, designed to customers' requirements, mechanical ventilating, and general sheetmetal work.

The firm does all types of aluminium and stainless steel fabrication, argon arc welding of mild steel and stainless steel and aluminium with the Lynx semi-automatic welder.

Mr Speir's firm was the first in Southland and one of the first in the South Island to get a Lynx welder.

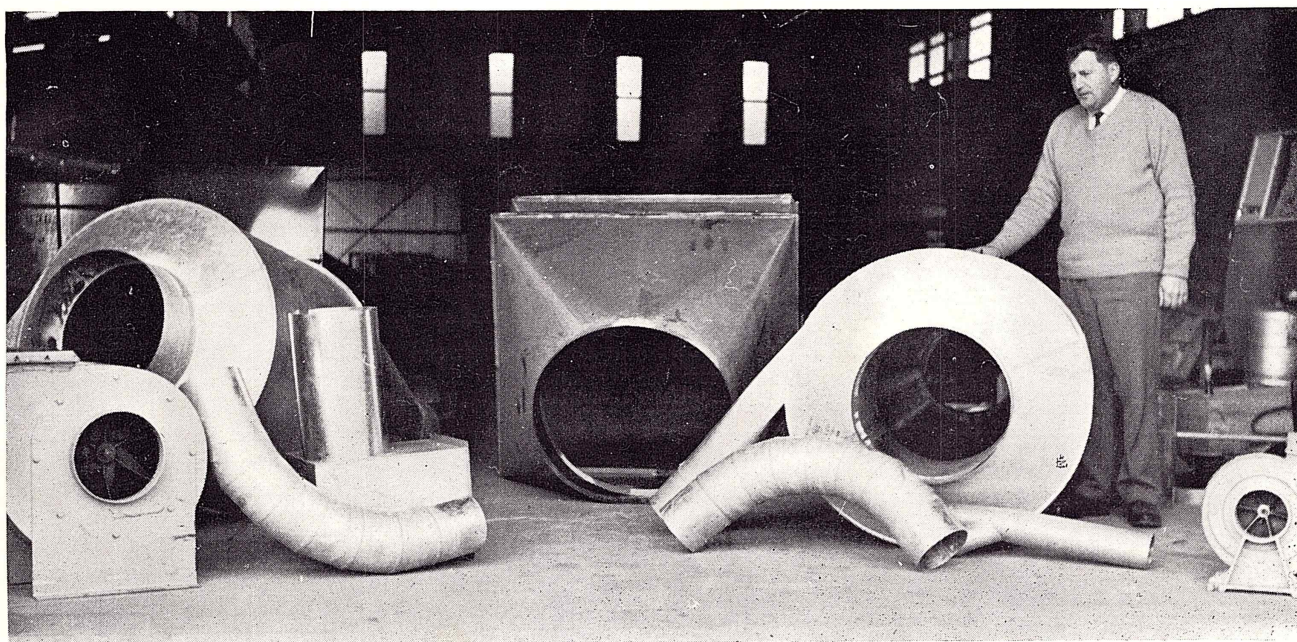
With Southland's agriculture industry booming, the future of Sheet Metalcraft is assured. There will always be plenty of business for the firm.

And even brighter things may come for the metal firm with the establishment of Comalco's aluminium smelter at Bluff.



ABOVE: A welder on the job constructing an access ladder to a wheat silo — a featured product of Sheet Metalcraft.

BELOW: Norman Speirs, manager of Sheet Metalcraft, casts an eye over some of the finished products before dispatch. The products featured are wheat silo components.



PRESTRESSED CONCRETE PRODUCTS

WATER TANKS

STEEL

PROTECTION



Pre-cast water tanks containing 75,000 gallons acting as a reservoir for Manapouri village.

PNEUMATIC CONCRETERS LTD.

Otepunī Avenue

INVERCARGILL

Phone 69-845

THE Southland firm of Pneumatic Concreters Ltd commenced operations in 1952 on a 1800 sq. ft. site in Otepunī Ave, Invercargill. Today, 14 years later, there is much evidence of their expansion. The factory, although still situated in the same street, is on a new 7000 sq. ft. site, employing a staff of eight in comparison with the initial staff of four.

The firm is associated with a range of prestressed concrete products which have in various ways contributed to the development of the area. This includes the production of concrete power poles numbering up to four or five thousand annually. Most of this output is now handled by another company in which

Pneumatic Concreters have a financial interest.

Pneumatic Concreters Ltd specialise in the production of pre-cast concrete water tanks and reservoirs by the "cement gun" process — a method unique to this firm. Evidence of their activity in tank production may be seen at the Puysegeur Point Lighthouse, Stewart Island and Dog Island (here the tanks were transported by ship then floated ashore), and also around Te Anau, Queenstown, Wanaka, Monowai and all adjacent areas.

The protection of steel by shot and sand blasting is another "specialty" of Pneumatic Concreters. A major undertaking in this field was the cleaning and

painting of the intake pipes and penstocks at the Monowai hydro-electric scheme. This is the largest internal sand blasting project undertaken in New Zealand.

The general policy of this firm is to "have a shot" and undertake work in those fields not already provided for. They are also suppliers and contractors to the Deep Cove West Arm Scheme, the Ministry of Works and all major local bodies in this area.

Quality is the first consideration of Pneumatic Concreters and they offer an unqualified guarantee against faulty workmanship or materials. This progressive company largely owes its success to forward planning and quality workmanship.

R. G. SPEIRS LTD.

134 DEE STREET, INVERCARGILL

P.O. BOX 295
PHONE 5154

FOUNDED in 1881 the Invercargill firm of R. G. Speirs Ltd is one of the oldest established firms in the city but despite this age has kept pace with the latest techniques used in its business of sheetmetal and stainless steel manufacturing plus plumbing and plumbing merchants. But, consistent with its tradition, R. G. Speirs Ltd has retained the individual craftsmanship which makes its versatility a feature.

Products from the firm have gone all over New Zealand. Canterbury is the destination for many of the Speirs steel moulds for concrete products. Articles like these indicate the wide appeal of this Invercargill firm's manufactures. Skill is needed to cope with up to 100 different jobs in a week that R. G. Speirs Ltd is regularly called on to handle.

Without a highly trained staff — numbering 50 at present, contrasting with three at the firm's foundation — and some modern machine tools this volume and variety would not be maintained. There are seven apprentices in the present-day total.

Heading the 85-year-old firm is Mr R. G. Speirs, the grandson of the founder, who has maintained a close family link.

Mr Speirs explained that there had been a constant change in the type of articles being made. Years ago tinware products — billies, buckets — were common. But today a greater variety in

fashions and industrial complexity had seen large units leaving the Dee Street factory. One of these was the manufacture of steel ducting for the giant Manapouri power project. Speirs Ltd made various sizes ranging up to 48in. in diameter of 16 and 14 gauge steel.

A recent development has been the branching out into stainless steel fabrication. Refrigerated display cabinets, urinals, in fact anything that can be made to specification are made in the factory which covers a little more than an acre right in the heart of the city. An inspection of the factory showed that there is nothing of the soul-destroying assembly-line method in filling these orders. Modern machines are used by craftsmen whose versatility is so taken for granted as to be shrugged off with a non-committal comment. But there's no doubt that the skill of these men under planned routines is responsible for the high place the firm occupies. This versatility is a matter for pride. The results are there for all to see throughout Southland and beyond.

Originally the firm started off as plumbers and tinsmiths and today as plumbers' merchants, catering for numerous Southland plumbers, Speirs Ltd has maintained this connection. Many of the articles ordered are made to specification whether in brass, copper, mild steel, lead or stainless steel. Machines manufacturing the continuous supply of

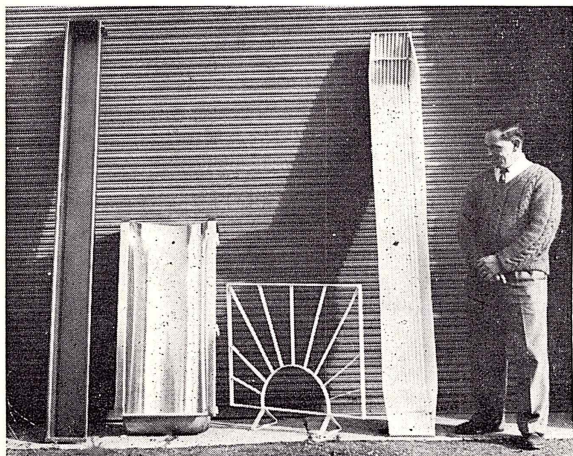
downpipe or spouting have proved a great step forward, says Mr Speirs.

Lengths of up to 100ft have been manufactured using these machines. As works manager Walter Williams said recently "Only the size of the transport limits the lengths possible with these units."

Over the years Speirs Ltd have had many notable achievements to their credit. One of the most complicated constructions was the development of a steel mould for a concrete salt-lick box, said Mr Speirs. Difficulties in design and manufacture were overcome. On the bigger end the Manapouri ducting and a 300-gallon copper superheater were also notable achievements.

In a firm like this there is a willingness to have a go at anything that can come within the orbit of the men's capabilities. But then there's always been this tradition. For instance Speirs Ltd was the first firm in Invercargill to undertake panelbeating in days when cars were primitive and knowledge about them and panelbeating was largely a matter of experimentation. This section of the firm's activities had to be closed down at the outbreak of World War II when the staff went off to war. It was not revived afterwards.

Long established and solidly based, Speirs Ltd is one of Southland's notable firms whose reputation for reliability and enterprise is to be seen in thousands of homes in the shape of numerous metal and plumbing products. Know how and management skill built up over three generations will ensure that the firm will remain at the forefront of the industry.



Puzzling over the best way to arrange these smaller, portable products is Walter Williams, works manager of the Invercargill firm of R. G. Speirs Ltd. These are, from left, steel mould for concrete posts, stainless steel urinal, wrought iron sample and galvanised footrot treatment trough which has N.Z.-wide distribution.



A welder works on a 24in. steel ducting for the giant Manapouri power scheme. Ducting like this is essential to the workings of the men and machines in the underground workings in the rugged Fiordland. Speirs has also provided ducting twice as big as this shown.

SERVING SOUTHLAND FOR OVER 60 YEARS

Present range of vehicles include:

Austin Mini; Austin 1100; Austin 1800; Vanden Plas Princess R.; Austin Healey; Cooper; Austin Mini Van; Austin $\frac{1}{2}$ ton Pickup; Austin $\frac{1}{2}$ ton Panel Van; Austin 15 cwt Van; Austin Trucks, petrol and diesel, 30 cwt to 18 tons; The cross country 4 wheel drive Gipsy.



A view of the customers' reception of the Service Parts and Accessories Division.
Many public gatherings have been held in the spacious showroom.

TRANSPORT IN THE LIFE OF SOUTHLAND

The wide productive plains of Southland have made efficient and economical transport a necessity for the well being of the province. The provision of servicing facilities for the essential transport serving the primary producers is not only a business, it is also a responsibility to the community. The firm of P. H. Vickery Limited early recognised this and the premises facing Dee, Leet and Leven Sts built in 1926 were unusually modern and commodious for that time. In 1957 the ultra modern split level commercial vehicle workshop in Leet St was added, approximately doubling the working space of the workshops. A branch was opened in Gore also in 1957 and new premises built there opening on to Main, Ashton and Fairfield Streets.

P. H. VICKERY LIMITED FOR SERVICE

FOR YOUR EVERY MOTORING REQUIREMENT
P. H. VICKERY LTD.

LICENSED MOTOR VEHICLE DEALER

INVERCARGILL and GORE

P. H. VICKERY LTD.

Austin Distributors since 1919 with the Direct
Austin Factory Franchise held for over 47 years

THE Business was founded by Mr P. H. Vickery about the beginning of this century, and was later expanded in association with his brother, Mr T. W. Vickery. Many famous makes of motor cars have been delivered to thousands of Southland owners over the years but the name of P. H. Vickery Limited is particularly associated with Austin, Dodge Bros., and Studebaker.

Service to the Public

From its inception, the policy of the Company has been to provide the best possible service to the motoring public of Southland, to be accepted as a Southland firm doing business in the interests of Southland as a whole, giving employment to Southlanders, and contributing to the well being and to the development of the province.

P. H. Vickery Bequest

Mr P. H. Vickery was an outstanding business man who had many interests outside the concern carrying his name. He will be remembered for his magnificent gift of £250,000 for the benefit of elderly folk in Southland, an example of giving back to the province the results of his business acumen and of the

loyal support of the people of Southland.

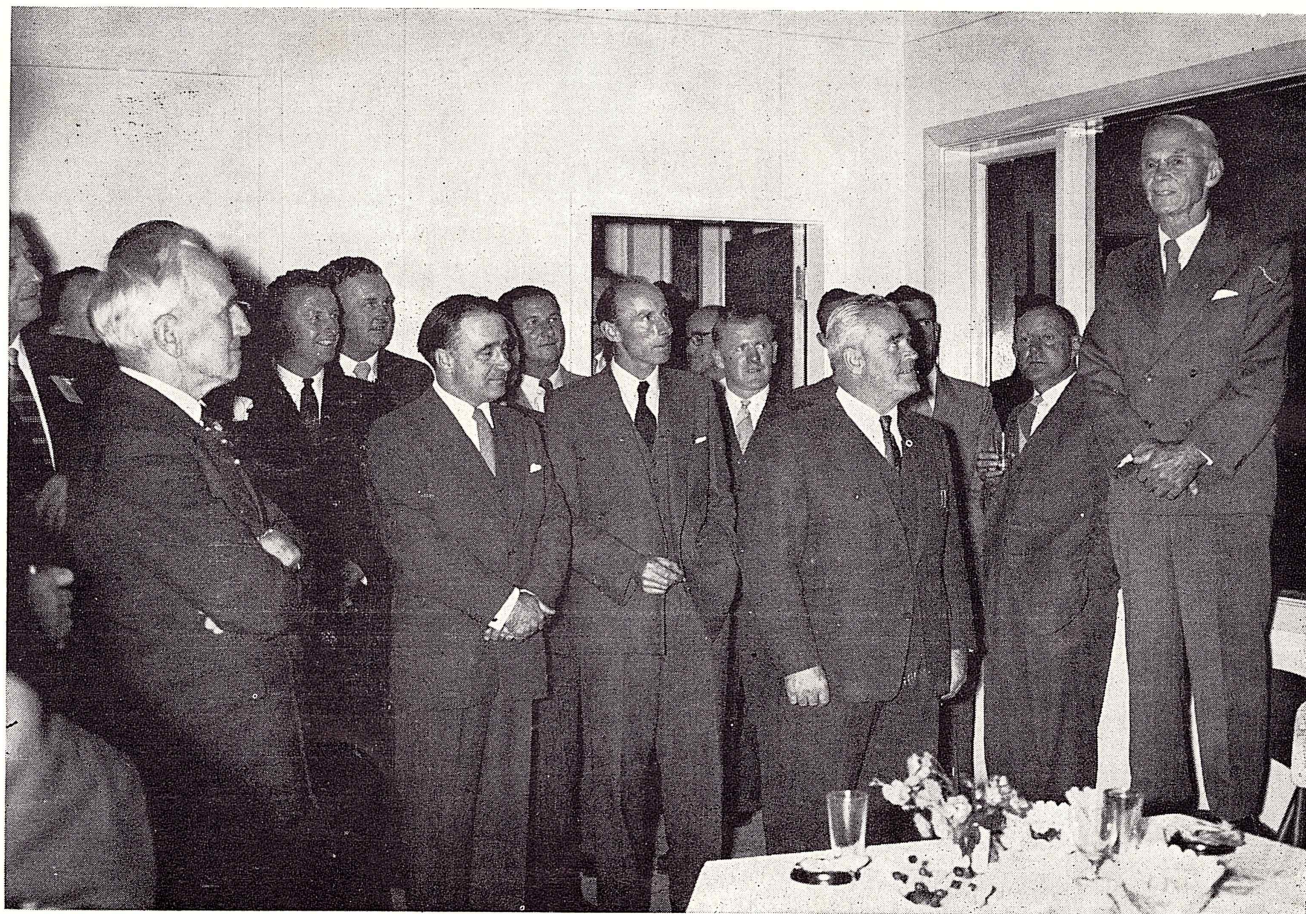
Plans are in hand for the first of the Homes for the Aged envisaged by Mr Vickery, and this will be built on a most suitable site that has been secured on the main north road at Waikiwi, Invercargill. An Aged People's Welfare Centre is being also built right in the centre of the City of Invercargill.

Mr A. Walmsley has been managing director of P. H. Vickery Ltd for the last 24 years and has continued the policy of

making the greatest possible contribution to the community life of Southland return for the business goodwill which the firm continues to enjoy. It has consistently been the desire of Mr Vickery and Mr Walmsley to make the business of P. H. Vickery Limited part of the Southland scene. The well known and beautiful showroom has for years been the centre of special motoring displays such as exhibitions of Vintage cars and of Racing cars, etc. The photo (below) of famous personalities in motor racing illustrates one of these occasions.



Signing autographs in the showroom in aid of funds for the Crippled Children's Society:
Left to right, Stirling Moss, Jack Brabham, Bruce McLaren, Angus Hislop.



The late Mr P. H. Vickery addressing guests at the opening of the new commercial department. In front are (left to right) Mr A. L. Adamson, then Mayor of Invercargill; the late Mr R. M. Hutton-Potts, then editor of the Southland News; Mr F. N. Anderson, manager Southland Times; Mr A. Walmsley, managing director P. H. Vickery Limited and Mr Vickery.

The Austin Franchise

Direct factory franchise holders and therefore direct importers of Austin vehicles for forty-seven years, makes the firm one of the longest term Austin Distributors in the world. The policy has always been to give the very best service possible to clients and the splendid showroom on the corner of Dee and Leet Streets has seen literally thousands of cars and trucks delivered to owners all over Southland. Probably some 16,000 vehicles have been sent from this one showroom to serve the public of Southland.

For forty years Austin cars have been displayed, sold and serviced from the present situation at Dee, Leet and Leven

Streets. In earlier years the Company operated from Tay and Wood Streets where the Southland Building Society now have their building. Of recent years with the spectacular growth of Southland and the natural expansion of the business, the splendid new Commercial Vehicle Division was built also on Leet Street with the specially designed two-level workshop one of the most modern in the country. The original Invercargill building and particularly the showroom, sales offices, service Parts Display, and offices have recently been completely modernised.

The history of Austin Vehicles in Southland covers an amazing range of vehicles.

Old Favourites

Commencing with the famous old Austin 20 h.p. and then developing two of the most popular cars ever produced in England, namely the Austin twelve Four, and the Austin Seven—the Baby Austin, it became apparent that Lord

Austin, or Sir Herbert Austin as he then was, was going to produce vehicles noted for engineering excellence. This emphasis on sheer engineering quality has been continued over the years, no doubt largely owing to the fact that the three men who have been at the head of Austin since its inception, have all been brilliant engineers: Lord Austin, followed by Sir Leonard Lord (Lord Lam-bury) and now by Sir George Harriman, Chairman and Managing Director of the giant British Motor Corporation.

Mini to Vanden Plas

These early models were succeeded by many most popular car models including the Austin Eight, the Ten, the Devon, the Cambridge, etc., until today there is the tremendous range of models from the ubiquitous Mini, through the Austin 1100, Austin 1800, Westminster, Austin Healey, etc., to the luxury executive type car with Roll-Royce motor, the Vanden Plas Princess R.

SOUTHLAND —

Transport Conscious

SOUTHLAND'S golden era in transportation is dawning. Master transportation plans are coming to add the 'icing' to a basic system tailored with a conscience for the future.

Road, rail, water or air networks extend to every corner of the far-flung region.

Railway lines total about 290 miles and roads about 4220 (nearly a third of them sealed).

A modern stabilised ferry sails between the Port of Bluff and Stewart Island and around the southern coasts.

The Railways Department has a large steamer on Lake Wakatipu.

Facilities of the natural harbour at Bluff are among the world's finest.

Invercargill Airport's modern amenities serve rapidly increasing traffic ranging from national turbo-prop aircraft to Southland-based amphibians.

The Railway

If there has to be a Cinderella it is the railways. In common with much of the north, the lines that did so much to set the pattern for mobility have fallen on hard times with roading and road transport advances. Yet that is not not to say the lines are anything but significant.

From Invercargill there is the busy main line north with expresses, railcars and goods trains, and there are lines or spurs to Bluff (16 miles), Waimea (36 miles), Tuatapere (56 miles), Wairio (22 miles), Kingston (86 miles), Browns (five miles) and Mossburn (10 miles).

On them are hauled coal, cement, timber, superphosphate and lime, frozen meat, stock and other items in the widest range. Railway Road Service coaches are doing increasing business on runs between Invercargill and Dunedin, Queenstown, Milford, Manapouri and other centres.

As it was for railway construction, so is it that Southland in large measure is suited to pleasant roading and relatively easy development of air transport. Much of the land lends itself to the creation of airports and airstrips, while rugged Fiordland's sounds and innumerable lakes are a Godsend to the amphibian aircraft and hunters and tourists.

At Invercargill there is provision to extend the 4000ft sealed runway to 6000ft — probable in 1968-69 — which would accommodate New Zealand's largest internal aircraft. The runway could be extended to 10,000ft without land problems. Meanwhile, a large new air terminal and a new control tower have been erected and an extensive car park provided.

The Airport

National Airways Corporation business through the airport has shown big increases. The number of passengers on NAC flights in and out shot up 50 per cent in the three years to March, 1966. The 1965-66 increase was 17 per cent, about 5 per cent above the national average annual rise. NAC freight handled at Invercargill went up by 12 per cent and outward cargo was responsible for most of the boost.

By far the biggest investment, however, is in roading — on which more than \$3,430,000 was spent in Southland in 1965-66: about \$768,000 on State highways, \$1,764,000 on county roads and \$810,000 on municipal streets. New sealing totalled 72.62 miles, second-highest tally among South Island road districts and fourth-highest in New Zealand. Of the 460 miles of State highways, only 39 miles are unsealed.

More than a fifth of the 3498 miles of county roads are sealed and more than two-thirds of those in Southland municipalities.

In the 14 years since the National Roads Board was launched, some \$32 million has been spent on Southland roads and bridges. Of that, \$20 million has been allocated by the board through the Southland (No. 18) District Roads Council. State highways have absorbed \$12 million of that and \$8,000,000 has gone to local authority road and street works.

In addition, local authorities have spent \$12 million of their own income on roads and bridges.

Big Roading Projects

Outside the city of Invercargill, big projects in hand, pending or planned, are in two main categories: roads for farmland development and roads for tourism. Often, though, a road for farmland development is also a road for tourism.

An instance is completion of a road linking Clifden in Western Southland with The Key in Northern Southland. From The Key it is only 16 miles to either Manapouri or Te Anau. The road's completion will also open up 12,000 acres of land to development.

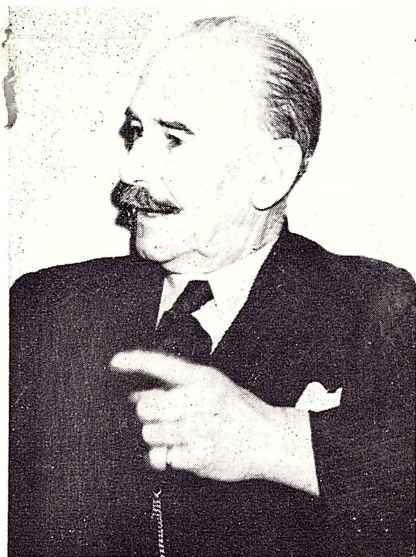
Likewise, a suggested road that would be New Zealand's highest, from Waikaia to Central Otago's Shingle Creek, would be a big help to back-country runholders and at the same time be a unique summer tourist route.

For yet another plan, a tourist road from Lake Te Anau's South Arm to Bradshaw Sound, money has been set aside and a survey planned.

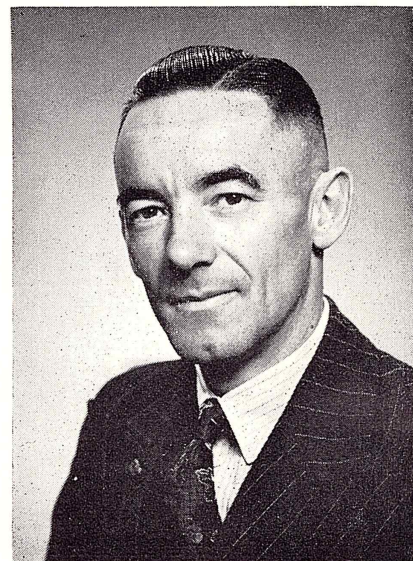
All would dovetail with the recently-opened Haast road linking Westland with Otago. In a survey it was estimated that 61.3 per cent of the Haast road traffic was continuing south to Queenstown or had been there, figures for other southern centres being: Te Anau (32.4 per cent), Milford (29.9 per cent), and Invercargill (27.2 per cent).

Western By-Pass

Big plans for Invercargill include a western by-pass route intended to serve most of the rural traffic which then would enter the city without intermediate stops. There is a long-range plan for a suburban motorway at the main entrance from the north to the city. There is a possibility that a former railway route south from the city will become a suburban motorway serving in particular the southern farming district. A large-scale transportation survey is in hand. Figures indicate that Invercargill's population is the most transport-conscious group in New Zealand. Chances are that the same could be said of all Southland.



ARTHUR S. RUSSELL



VERNON T. RUSSELL

V. T. R. MOTORS LTD.

(Licensed Motor Vehicle Dealers)

DEE AND LEET STREETS - INVERCARGILL

Phones 30 & 46

P.O. Box 36

South Island Distributors

CARS

HUMBER

PLYMOUTH

SUNBEAM

CHRYSLER VALIANT

TRUCKS

COMMER

KARRIER

Genuine Spare Parts

THE managing director and proprietor of V.T.R. Motors, Vernon T. Russell, is the son of the late Arthur S. Russell, one of the pioneers of the motor industry in New Zealand. Arthur Russell was the grandson of John James Taire, who immigrated to New Zealand in one of the first ships, the Tory. Taire married the adopted daughter of Edward Gibbon Wakefield in the first European marriage solemnised in Wellington, and took a very active part in the establishment of New Zealand as a colony. He assisted in the formation of the Bank of New Zealand and the N.Z. Insurance Company, and was an original shareholder of both organisations.

His grandson, Arthur S. Russell, was born in Dunedin and later the family shifted to Auckland where he spent his boyhood. Having reached the educational standard of four, he ran away from home and travelled south to Invercargill. He took various jobs as labourer,

ploughman and the like on various large sheep stations in Southland, Otago and learned the art of ploughing and cultivating with teams of horses. By hard work, conscientiousness and saving his earnings he was eventually able to purchase his own team of horses and a dray.

He toured Southland and Otago farms ploughing and cultivating, and often, because of lack of accommodation, was forced to spend the night in the dead of winter under his dray. Arthur Russell was determined to make good and spent all his spare time in study, reading everything he could lay his hands on.

Eventually he saved enough to purchase his own farm, and in the next few years improved his position by disposing of existing farms and purchasing better ones. At the turn of the century he was farming at Mokoreta when he heard that a new invention, the motor car, was to be displayed at the Invercargill Showgrounds.

Being interested in things mechanical and having taught himself to repair his own agricultural machinery, he travelled to Invercargill on horseback to inspect Southland's first motor car. He was greatly impressed and considered that the motor car had a future in spite of the sceptics, so much so that he disposed of his farm and took a job with a cycle engineer to improve his mechanical experience. He also purchased a motor car, an 8 hp DeDion Bouton, and spent some time dismantling and rebuilding it to find out exactly how it functioned. It is interesting to note that his son Vernon still has one of his father's original cars, a 1903 12 hp DeDion Bouton in first-class running order.

At this time one of Invercargill's first garages was being built by a Mr W. Stone on the present site of V.T.R. Motors' showroom. Arthur Russell went into partnership with this man under the name of Stone and Russell, thus establishing one of New Zealand's first garages and dealerships in the motor industry.

In three years he bought his partner out and founded the firm of A. Russell & Co. The firm had many ups and downs over the next few years running hire cars and taxis and selling DeDion, Darrach and Rapier cars, but by hard work, sometimes 24 hours per day, he eventually came out on top and around 1912 obtained the General Motors franchise of Buick.

From here he never looked back and in 1926 built the largest garage premises in Southland and one of the largest in New Zealand. This self-taught and self-

made man had built up an organisation which was a by-word in the motor industry of New Zealand. In 1934, because of ill-health, he sold all his interests in this large organisation to a company.

Arthur Russell had one son, Vernon Taire Russell. He was educated at Waitopai primary school, the Southland Technical College and St Andrew's College in Christchurch. In 1930 he entered his father's business to learn the trade as an ordinary motor apprentice and, having served his time as an apprentice and journeyman, was elevated to the position of motor car floor-salesman.

When his father relinquished his interests in A. Russell & Co. Ltd, he took a job with an opposition motor dealership to gain experience. In 1935, at the age of 21, he decided to branch out on his own and re-purchased the original building where his father had started as Stone & Russell, and converted it into a modern showroom, at the same time constructing a service department on an empty section at the rear.

He started with a partner and operated under the name of Russell & Peterson Co., with a sub-dealership for Morris cars and sole dealership for Terrafare, Hudson and Packard. Vernon found the going rough in his endeavours to compete with the large organisations selling the more popular American cars. He was often on the road from 6 in the morning to 11 at night in his endeavours to interest prospective purchasers in his trade marks.

In 1938 he bought out his partner and renamed the firm V.T.R. Motors,

using his initials as his trade name. In the same year he joined up with the Todd dealer organisation and procured the sole representation for Humber and De Soto cars, and Commer trucks.

Import restrictions and the war brought many setbacks; his staff dwindled as they volunteered for service or were called up, and in 1942 Vernon himself joined the Air Force. His father, who had somewhat recovered his health, came out of retirement and took over the running of his son's business.

After serving with the Air Force both in New Zealand and overseas, Vernon returned to his business after the war and set about rebuilding it, as the war and consequent lack of new cars had brought it to quite a low ebb.

Since then V.T.R. Motors Ltd has prospered and is now one of the leading dealerships in Southland, still holding the Todd franchise of Humber, Hillman, Sunbeam, Chrysler and Plymouth cars, and Commer trucks. Over the years the original showroom has practically been rebuilt and the adjacent section now accommodates a modern lubrication department. On the other side of this is a large parts department.

Recently an adjacent piece of ground was purchased for parking facilities and the company has just taken over more premises at the rear. Some of these buildings are to be rebuilt and will house a new, modern truck service department. V.T.R. Motors will then have substantial premises occupying a complete corner block.



The main part of the premises of V.T.R. Motors Ltd.



George and Sid Purdue, of Purdue Bros., alongside one of their fleet of trucks outside their Invercargill office.

PURDUE BROS. LTD.

CARTAGE CONTRACTORS

GRAVEL MERCHANTS

FURNITURE REMOVALS

NITH STREET - INVERCARGILL - PHONE 88-237

PROVIDING the same sort of vigorous service to the Southland community as they did in their rugby-playing days are the Purdue brothers — Sid and George, principals of the family business of cartage contractors.

Southlanders know of their prowess on the rugby field for their playing careers at the peak of Southland's "golden era" made their names household words. They reinforced the doughty

deeds of their cousins, fathers and uncles.

But today the Purdue Brothers have won a place on the Southland scene for the size and efficiency of their transport firm which is equipped with the latest in modern trucks and other aids such as radio-telephone. As Sid said recently "We'll handle anything that can be shifted." A glance at a typical week's worksheet seems to bear out that claim.

A small house to be carted to Queens-town (120 miles) and another to the West Arm section of the Manapouri power scheme; a furniture shipment to a country site; several loads of wool to Bluff for shipment overseas; a load of gravel for a home builder . . .

The list goes on and in some respects (apart from having to punt a load of steel across to West Arm) could be repeated in many other parts of the country. But what really makes the difference is to watch the efficiency in turnround and despatch by either brother working in the office. Radio telephone — "a great help" says George, is frequently in use. It's obvious too that planning of operations weeks ahead has been thoughtfully carried out and obviously pays off. Efficiency is the key word in this firm which had in one sense at least its name 'made' before a wheel turned. Growth has been steady — built on service.

The Purdue family, one of Southland's greatest sporting families, originally came from Orepuki in Western Southland where an oil strike in shale had followed a small gold strike. Henry Hirst, a solid Yorkshireman was the founder of the family which retains its connection with the area near Orepuki known as Hirst. In fact Orepuki was once known as Hirstfield. From the Hirst side and that of grandfather Dick Dallas emerged the Purdues.

Charlie and Ned, brothers, both represented New Zealand at rugby as did Pat the father of Sid and George. In fact Charlie played for Southland in 1896, went to Australia in 1899 and was selected for the New South Wales team. On return to New Zealand he played for his country against New South Wales. The two brothers played for Southland in 1905 and were both chosen for New Zealand that year.

George, son of Pat, played for New Zealand in 1931 and for the N.Z. Maoris that year. He toured Australia in 1932 and seemed set for a British tour (1935) when he was injured.

Massively-built like his brother, Sid was a forward in Southland's famed

1939 teams which put up several records in defence of the Ranfurly Shield and which had no fewer than 10 players in the final All Black trial played with a view to a South African tour in 1940. The war intervened and like so many others, sterner tasks than playing football beckoned.

(A cousin, Jack Purdue, was halfback for that mighty 1939 Southland team, being placed ahead of Charlie Saxton who played at first five-eighth!)

After the war George and Sid set to work to build up a carrying business in the city. The family had moved in from Orepuki in 1937. The brothers started in an open section on the Bluff road in 1946 and moved to their present site on the corner of Nith and Tyne Streets in 1951. Both places were open to the elements — far cry from the modern premises now used.

Today the main business is carried on in a building 160ft by 80ft which is being added to on an adjacent property with the handling of a new service station and large workshop. These should be built by Christmas this year.

From the two brothers and their old army truck in 1946 the firm now has 15 of a staff. Modern trucks and their greater versatility and capacity hold the greatest contrast for the brothers when reviewing the progress of the firm. They have carted all over the South Island

with a special permit but most of their work lies within 40 miles radius of the city.

Modern Bedford trucks being used more than double the capacity of the loads they carted formerly. Three loaders also speed up the bulk loading operations. By contrast the firm will handle anything down to a stick of furniture and up to a house. It has done both — and practically everything in between!

One story told by George typifies many things not the least the contrast of then an now and also the good humour of the brothers.

Apparently one driver was extolling the premises of a country carrying concern. Knowing the particular firm and their supposed amenities well Sid asked what the driver thought was so superior to their own set up.

"That's easy," said the man. "Their's got a gate on their paddock."

Things like those primitive conditions are indeed a far cry from the up-to-date business premises housing the Purdue Brothers today. And both men are fully aware that what has placed them in a thriving condition today has been the attention to service to the public of Invercargill and Southland.

But then, as most Southlanders know, that tradition of service is only carrying on from the days when they served their province on the sporting fields.



Purdue Bros.' depot in Nith Street. The gravel pit is at Otatara.



Part of the company's fleet of high class touring coaches and modern cars for private hire.

H. & H. TRAVEL LINES LTD.

Combined Company Meets Southland's Passenger Transport Needs

THE recent formation of the H & H Travel Lines Ltd by the amalgamation of the bus and coach activities of H & H Motors Ltd and Southland News Co. Ltd. adds another chapter to the story of passenger transport in Southland—a story going back to the dawn of the motor bus era in New Zealand.

In 1924, Mr George Hewton, then living in Otautau, saw the possibilities of a bus service to Invercargill. He brought a 4-cylinder Graham bus with canvas hood and side curtains which seated about 19 passengers, and started running daily between Otautau and Invercargill. In 1927 he moved his business to Invercargill and established it

in Leven Street. Buses departed from the alley beside the Grand Hotel.

Initially, Mr Hewton co-operated with his brother-in-law, Mr Heenan of Gore, and the buses were run under the name of "Hewton and Heenans". In 1931 the business had grown to such an extent that a private company was formed with the name H & H Motors Ltd, and a fleet of five buses. The accent of the business was on rural services and in the heyday of the country services, buses were running daily to Invercargill from Riverton, Colac Bay, Tuatapere, Otautau, Ohai/Nightcaps (four different routes) Mossburn, Waikawa, Haldane, and Waimahaka.

The News Motor Services grew out

of a need to get the Southland Daily News delivered during the 1924 Rail Strike. Initially cars were used but the advantages of combining passenger services with newspaper deliveries were realised and soon the cars were replaced by buses. The development of the News Motor Services paralleled that of H & H Motors Ltd, and by 1950, services ran to Tuatapere, Dipton, Waitane, Gore and Wyndham.

However, by 1953, the increasing number of private cars were making serious inroads on the patronage of public transport throughout the world and Southland was no exception. Traffic gradually declined and these operators were forced to abandon some of their services as lack of patronage made them uneconomic. Today the combined fleets are running daily services to twelve country centres, into Invercargill in the morning and outward to the country terminals in the afternoon.

Through the years other services of a suburban character have been added and the company now runs high frequency services to the Invercargill suburbs of

Otatara, Waikiwi and Grassmere and also between Invercargill and Bluff and Gore.

A long distance service linking Invercargill and Cromwell through Central Otago was acquired a few years ago and a daily return service is now operating on this route.

Tourist Traffic

Being situated in the closest city to the world-famous scenic attractions of Milford Sound, Fiordland and Queenstown, the importance of tourist traffic has always been recognised and excursions have been run to Te Anau for example, since the 1920s.

The upsurge in the tourist industry has been anticipated, for in recent years many high class touring coaches have been added to the fleet. The result is that a large proportion of the fleet is now suitable for overseas touring parties and during the tourist season is heavily booked for tourist work. The individual tourist who likes to see the country by himself is also catered for by the fleet of new American and large English cars which the company operates.

Another speciality of the summer holiday season is the range of one-day trips. H & H Travel Lines operate to Milford Sound, Queenstown, Central Otago and through Chaslands and Curio Bay. These trips enable tourists to see the beauty spots of the Southern districts in comfort, while enjoying the convenience of staying in a large city which has facilities available not usually present at tourist resorts.

The Future.

The future of this company is tied up very closely with the development of Southland. Being a service industry they must wait the opportunity to serve new industries which become established in the province. But two things are certain.

H & H Travel Lines is ready and able to fulfil the transport need of any industrial organisation which decide to set up business in Southland and they are fully equipped to handle the greatly increased flow of tourist both from overseas and from other parts of New Zealand who are wanting to see the scenic beauty of Southland.

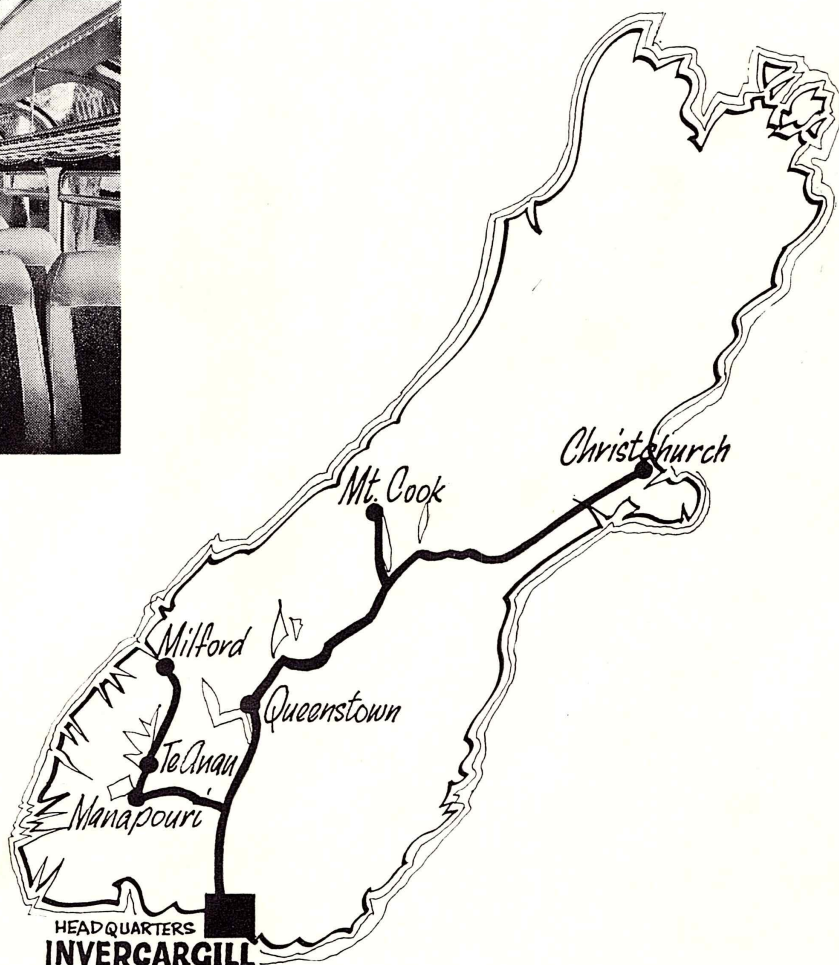


See the South in comfort in a modern H & H Coach.

For all enquiries and reservations book with your local travel agents.

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INVERCARGILL**

PHONE 3016



INVERCARGILL ENGINEERING CO. LTD.

GENERAL ENGINEERS ——— MOTOR RECONDITIONERS

(Registered Wholesalers)

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Specialists in

Hydraulic Equipment

Metal Spraying

Excavation Repairs

Lathe Work

Manufacturers of

Steel Sheep & Cattle Yards

Farm Buildings

Grain Silos

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Fertiliser Batching & Mixing Plants

Steel Water Towers

Conveyor Equipment

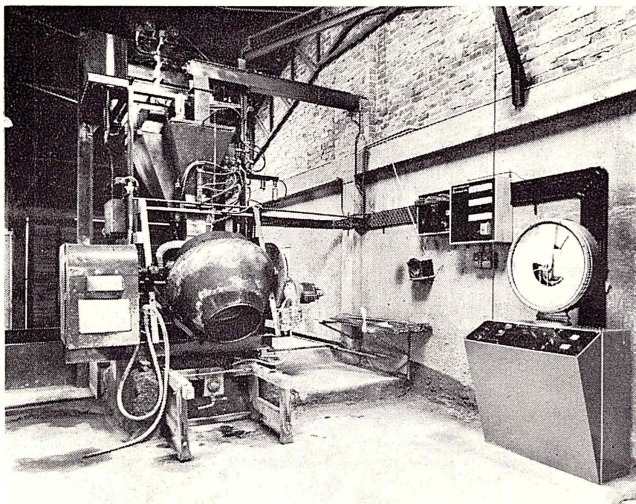
THE Invercargill Engineering Company Ltd has grown from a small corrugated iron shed at 136 Tay Street to premises totalling 22,500 square feet. The staff, which totalled 3 when the firm commenced operations in 1947, now numbers 50.

Over the years the activities of the Invercargill Engineering Company have become more diversified and it is engaged in the designing and manufacturing of plant, particularly weigh batching, for northern centres.

Incorporated in the extensive premises are the two main workshops. One of these is solely for engine reconditioning and a large stock of spare parts and

motors is carried. The engineering workshop carries out a number of activities including lathe work, metal spraying, welding and general engineering repairs, structural steel work, and the fabrication of various types of farm and industrial equipment.

Besides the fine three-storeyed building now housing the business, more land has been acquired on the outskirts of the city for further expansion. This local company, with working shareholders, has been closely associated with the development of both industry and agriculture in Southland and is well known and trusted in the field of general engineering and engine reconditioning.



Concrete batching plant.

Engine Reconditioning

Crankshaft Grinding

Cylinder Boring

Piston Grinding

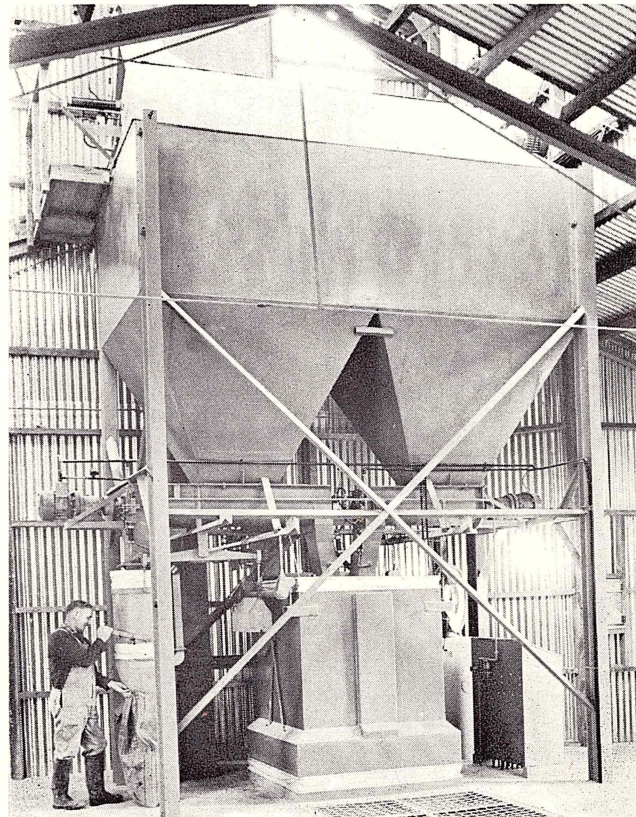
Remetalling

Line Boring

Valve Refacing

Piston Expanding

Fertiliser mixing plant.





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CRAIGS

The Imprint on Quality Printing

TAY STREET, INVERCARGILL



The delivery fleet of A. C. Millars Ltd as it is today with (inset) the present chairman of directors, Mr W. W. Millar, at the helm of a Harley Davidson combination in 1916.

A. C. MILLARS LTD.

BAKERS AND PASTRYCOOKS

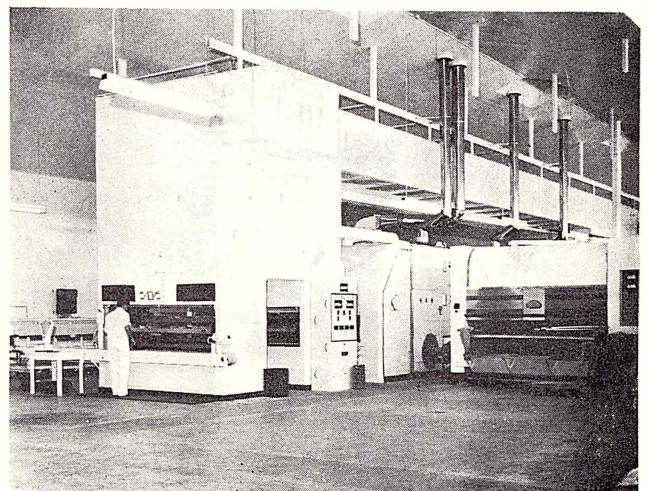
BAKER STREET

INVERCARGILL

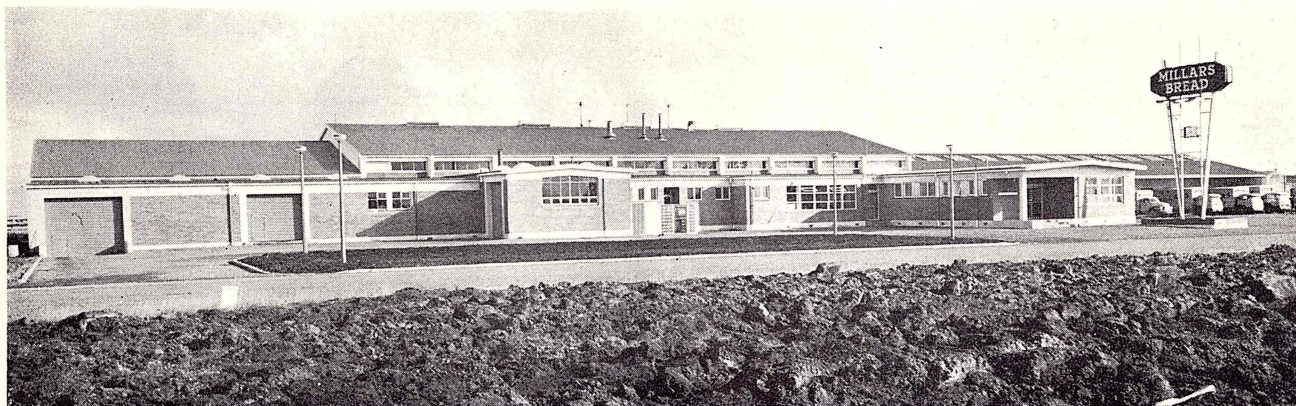
P.O. BOX 29



ABOVE: The original bakery about 1912.



RIGHT: Final prover and ovens in the new bakery.



The modern bakery.

SINCE the early beginnings of their business in the latter part of the 19th century, Millars have been associated with the baking and selling of foodstuffs. The original bakehouse was located on the corner of Conon and Bowmont Streets, and here John and Annie Millar, the grandparents of the present manager, commenced supplying their products to the people of Invercargill.

As the business expanded the firm moved to premises in Dee Street, where a shop and tearooms were set up. Further selling agencies were established at Matakura, Gore and Winton, widening the field of distribution and contributing to the firm's strength and success.

In 1910 the family business was formed into a private limited company under the name of A.C.M. Ltd. Later this was changed to the present name of A. C. Millars Ltd. The baking of bread was not primarily associated with Millars until after the First World War, when it was decided to install an oven in the Tay Street factory. From these small beginnings has grown one of the largest and most progressive baking businesses in New Zealand.

In 1957 the directors, with an eye to the future, decided to build a new bakehouse, as the scope for expansion was limited on the Tay Street premises. A suitable site was purchased in 1958, but the actual construction was not begun until August of 1964, under the direction of Mr C. D. Anderson, an Invercargill building contractor. The completed premises were officially opened in February 1966.

Millars started up in business with an original staff of four and today employ about 70. Apart from the bakers and pastrycooks involved in the actual

production of bread and the various items of small goods, the firm employs shop and office staff, motor mechanics, storemen and salesmen drivers to deliver the goods to retailers throughout the province.

Five trucks are engaged in delivering goods to customers in and around Invercargill, and other regular deliveries are made to places as far afield as Niagara, Bluff, Tuatapere, Ohai, Te Anau, Wai-kaia and Tapanui.

From the time that baking operations commence each week early on Sunday morning work is carried out continuously 24 hours a day until late on Friday

night, and then again through most of Saturday. Long shifts are involved, particularly at weekends and holiday times. Because of these long and irregular working hours, amenities of a high order have been included in the design and planning to make working conditions as pleasant as possible for the staff.

The plant and equipment at Millars is of the most modern design so as to ensure that their products are of the highest possible standard. A. C. Millars Ltd have served Invercargill and the surrounding districts for over 65 years and will continue to do so to the best of their ability in the future.



Directors of A. C. Millars in 1957 — from left: G. B. Millar (then chairman, now deceased), Bruce Millar (production manager), Andrew C. Millar (now deceased), A. Cleland Millar (managing director), W. W. Millar (present chairman).

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Ah, but what a flavour is added when you stir is one or two teaspoonsful of Strang's . . . the freshly-blended Indian Curry Powder. Not just ordinary curry powder, mind you, but Indian curry powder, blended from exotic-tasting Indian spices. A marvellous flavouring additive to curried eggs, curried sausages, curried chops, curried steak, fish dishes, poultry, mince . . . and that's only a start of the meals that will enthuse you

P.S.: Strang's Indian Curry Powder is also available EXTRA HOT!



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INDIAN
CURRY POWDER**

A quality product of David Strang Limited, Invercargill

Serving Southland—

CRAIG'S PRINTING WORKS

WILLIAM CRAIG, the son of a customs officer in Dublin, immigrated at the age of 20 to Australia "the land of unlimited resources, genial climate and gold." He returned to the Old Country in 1853 and then came out to Invercargill where he acquired proprietary interests in both The News and The Times.

Ownership of The News passed from Harnett and Company to William Craig and J. W. Bain in October, 1867, and to William Craig alone in 1869, to Craig and Robert Gilmour in 1869 and from Craig to H. Feldwick in 1876.

In 1876 William Craig purchased from Jacob Ott a section in Tay Street and established the Craig Printing Company, later carried on by his son Samuel Craig until the latter left for the north.

When William Craig died on December 19, 1903, his son, Samuel, who was at sea at the time, returned to Invercargill to take over the business which continued to operate as Craig and Company.

The present company, Craig Printing Company Limited, was incorporated in May, 1920. Mr Albert Dennison, a compositor, Mr Arthur Thornton Hind, a lithographer and Mr Arthur Henry Wilson, a lithographer, acquired the business of Craig and Company from Samuel Craig in April, 1920.

Messrs Dennison, Hind and Wilson came to Invercargill from Dunedin from the Caxton Printing Company, Dunedin, which went out of business at the time.

They immediately took steps to enlarge the plant and Mr P. W. Garrett who had been with Mr Samuel Craig since 1910, joined them in the formation of the new company.

The printing business was continued in premises leased from Samuel Craig and in 1923 a household and commercial stationery retailing shop was opened at the present site of the company.

In 1925, the factory now occupied by the company was completed and the

printing works were shifted to the present position.

In 1936 the process engraving department was started. This was, and is today, the only industry of this kind carried out in Southland.

Early in 1960 a progressive policy was embarked upon under the guidance of Mr Fenton W. Mark, General Manager. In recent years the stationery and office equipment showroom has been doubled in size and modernised, second storey extensions added and thousands of pounds of modern plant and equipment have been installed. Today the staff totals over 40.

Local Associations

SOUTHLAND PROGRESS LEAGUE INC.

Secretary: Alan S. Alsweiler.
Address: P.O. Box 311, Invercargill.
Phone 4538.

INVERCARGILL CHAMBER OF COMMERCE INC.

Secretary: Alan S. Alsweiler.
Address: P.O. Box 311, Invercargill.
Phone 4538.

GORE CHAMBER OF COMMERCE INC.

Secretary: A. J. Kearney.
Address: P.O. Box 172, Gore.
Phone 7416.

SOUTHLAND TRADES COUNCIL

Secretary: B. A. Manson.

SOUTHLAND EMPLOYERS' ASSN.

Secretary: Alan S. Alsweiler.
Address: P.O. Box 311, Invercargill.
Phone 4538.

MANUFACTURERS' ASSOCIATION

No permanent office — refer to Southland Progress League.

N.Z. ASSOCIATED GENERAL CONTRACTORS' FEDERATION INC.

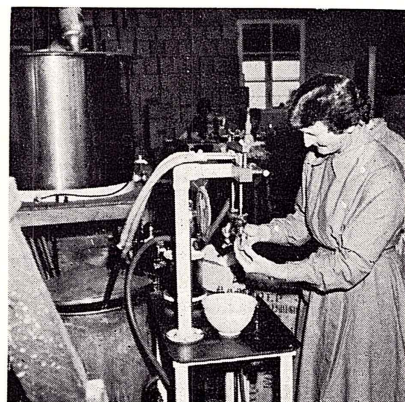
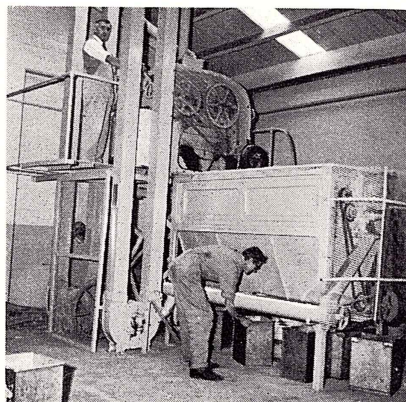
P.O. Box 311, Invercargill.

STRANG'S PRODUCTS

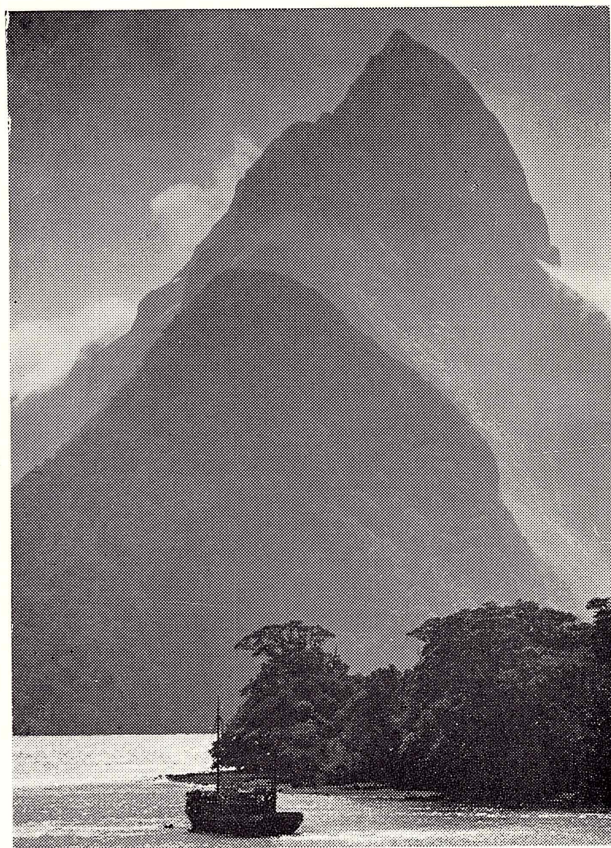
DAVID STRANG LTD was established in 1872 and has served the public of Southland for 94 years. It was set up by David Strang as a one man business, but today it employs a staff of 31, with permanent representatives in Southland, Otago and Canterbury, and selling agents in the North Island.

The business has passed down four generations from the founder to his

four sons, to two grandsons and now to a great grandson who is the present managing director. It is one of the few manufacturing industries in Southland not dependent on the farmer and his produce. David Strang Ltd imports up to 80 per cent of its materials through the port of Bluff, then they are processed and distributed throughout the country.



The FUTURE of SOUTHLAND



Mitre Peak, Milford Sound. A familiar sight for Southland tourists.

A CABLEWAY with gondola-style cars swishing from the foot of a peak to a chalet 1530ft above Queenstown is the latest in bait being readied for tourists in that dynamic New Zealand resort — and in the project is more than a hint of the future, the changes in prospect for the nation and especially the south.

Few specific changes that affect environment and way of life can be charted in detail, but broad outlines can be drawn and tourism is prominent among them, Southland appearing in the crystal ball as a giant holiday inn.

Much, much else is in prospect:

- A Southland likely to emerge, in line with a large part of the country, as a farm and farm-educator to the world.
- Farming taking to the sea in a big way.
- Increasing activity in mineral and power exploitation.
- Radical changes in city, towns, resorts and communications.

- Gradual revisions of local government.

In those and many other cases the signs are there. The graph of change is climbing steeply.

Yet nothing will promote change more than tourism, and there Southland is in a box seat for the approach of a millenium when the greatest movement will be towards play.

Frankton Arm

What is happening now on the Frankton Arm of Lake Wakatipu, where a town is in the making on a 59½-acre subdivision, will be repeated many times there and in Te Anau, Fiordland and mild Stewart Island. We are on the shores of another world.

As said by the Frankton Arm project promoter: There will be plenty of opportunity for new ideas and imagination. He visualises the Frankton subdivision, for instance, as the beginning of a whole town of mountain-type homes, just a few minutes even now by fast service

launch from Queenstown where there are more than a few good pointers to the dimensions of change, none more graphic than the Tourist Department Park. Today the park is of world note for beauty and variety where 100 years ago hardly a tree stood.

Faster Transport

People now go days by road or hours by air to sample such spots, as people in years ahead will go in a fraction of the time to delight in them between adding new attractions, perhaps the currently remote islands around Stewart Island, islands hiding rare beauties — and more often than not a birdlover's dream — behind forbidding shores taking the Pacific's full thrilling weight.

Tourists with a penchant for living history may also be able to observe the centuries-old expeditions mounted yearly by the Maoris to exploit the islands' culinary and industrial potential lying in the unusual sooty shearwater or mutton-bird.

Glories of Fiordland

Meanwhile, the Manapouri power scheme is opening eyes to yet greater tourist potential in Fiordland. The scheme has brought about a spectacular road on the transmission line route besides a 14-mile road linking Lake Manapouri's West Arm with coastal Doubtful Sound's Deep Cove, which puts up to 700 miles of breathtaking coastline within easy reach.

Doubtful Sound alone is about ten times as large as familiar Milford Sound and it is only a hop, step and jump to beautiful Dusky Sound from where trippers could take an incomparable walk over the mountains to Lake Hauroko, set now to become the latest holiday haven, only 70 miles by fine roads from Invercargill.

Access to Westland

Other magnificent scenery will inevitably be opened up to the north with a road between Jackson Bay and the Lower Hollyford Valley, giving a direct route between Westland and Southland. The Hollyford road has been pushed ahead in recent years and it has been estimated that now 60 miles of roading will bridge the gap, with a high point at Cascades Saddle, 1477ft. All the South Island's resorts could then be visited without steps having to be retraced at any point. It is the land of the future — the future being youth, for even within 20 years 35 per cent of the world's population will be under 15 years of age.

Checkerboard Farmlands

The checkerboard farmlands must remain, used more intensively and with greater specialisation until even the familiar roadside verges are absorbed. Company farming, as with Southland's 16,852-acre Beaumont Station, will take an increasing part in the new pattern, as will research in all fields, in particular soil fertility, stock and plants. Southland will make its contribution, too, in the ranks of practical instructors to the nations where just now a billion people are starving and a further billion are on the borderline (two-thirds of world population) for lack of knowledge on how to get the most from what they have.

Farm production increases will be exciting, but will demand vastly more sophisticated processing and marketing. The desired initiative is in Southland now

to a marked degree. There is the Alliance Freezing Company's accelerated freeze-dry plant as an example. Lately it has supplied peas to Japan and meat and vegetable lines to Australia besides meeting a steady demand for food pouches, used at New Zealand's Scott Base in Antarctica, and by the Police, Armed Forces, campers and sportsmen. The plant, at Southland's biggest meat works, began by drying about 650lbs. of food daily. Output from the freeze-dry plant has more than trebled since then with crayfish, oysters, blue cod, vegetables and a variety of meats.

Palletising Exports

Alliance also is among freezing works in on experimental shipments of meat in pallets, simple wooden platforms each holding a ton of meat in 35 cartons and facilitating transport in relatively large units, with minimum time and manpower, from works to overseas consignees. Alliance was a long way ahead of any other New Zealand freezing works when in 1965 it opened a \$500,000 cool store specially designed for handling pallets, and its move gave better efficiency at the works and faster and cheaper delivery to the Port of Bluff.

Dairy Industry

The dairy industry is also efficient, but constantly driving for greater efficiency. Says the Department of Agriculture's assistant director of the dairy division, Mr N. E. Briggs: "We are at a transition stage between the manual control and batch system in butter, casein and lactalbumin, and the continuous or automatic manufacture of all products . . . We are also a stage along the line towards the manufacture of pure dairy foods."

New Farming Techniques

Elsewhere, new farming lines are under close scrutiny, as in the case of sugar beet, which would be an economic proposition in Southland according to results of three years' trials. Markets are developing abroad for game such as venison and hares and, menace though the animals can be in the wild state, farming of them is not an unheard of idea.

New farming extends also to trout. Large-scale farming of trout in Southland is in the offing, described as a potential multi-million dollar overseas exchange earner. The idea has aroused favourable comment in airings at top levels since being studied fully by the fishing industry select committee in 1962 and favourably reported on by that committee and the Marine Department. There has been conservative American advice of a \$5,000,000 market potential there for trout cartoned in the round.

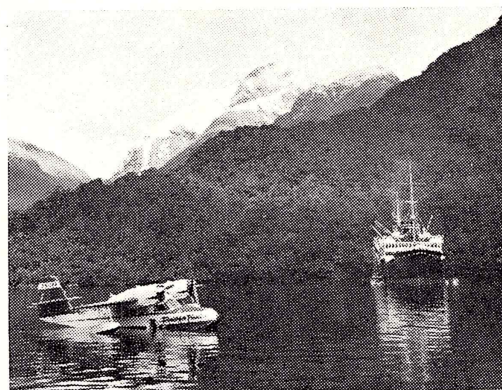
Sea Food Industry

But the sea fish and the sea are among the greatest assets awaiting new technologies and Southland's ocean resources are great by any standards. Thus it can be expected that the limited oyster farming



ABOVE RIGHT: A launch in the Milford Sound.

RIGHT: Deep Cove, site of New Zealand's largest hydro-electric scheme.



of today will be extended far. New Cousteaus will be diving into the depths for metals, minerals, medicine and especially food — seaweed and tiny plants and creatures being harvested for, say, algae bread or soup or even algae ice cream as Japanese scientists have done, or obtaining the makings for high-protein and tasteless and odourless fish flour as created by North American scientists.

A start has been made with chowders prepared from the finest Southland seafoods and packeted for the housewife who merely has to open, add water and simmer for a few minutes to enjoy all the flavour of oysters, crayfish, cod and the like. Southland toheroa soup is not overlooked either, with toheroas unique to New Zealand and able to titillate palates the world over. In short, the possibilities for viable industry are just about unlimited.

Forestry

Forestry will become more important than ever before and the Matura paper mill, for instance, should gain. The mill is producer of New Zealand's wallpaper bases and a big producer of quality writing papers among other items.

Steps have already been taken towards lifting the mill's output by two-thirds of its present capacity, from 15,000 tons yearly to 25,000 tons. Equally emphatic is the view of the Otago-Southland Conservator of Forests, Mr H. V. Hinds: If impetus is given to the planting of forests in the next few years, the Southland-Otago region could have the same opportunity for expansion in two decades as the Bay of Plenty area . . . He feels that the Bay of Plenty's rapid growth has received its greatest impetus from establishment and expansion of major forest industries. Spadework is being done in the south, a natural and wealthy timber producer from both indigenous and exotic forests.

Vast Coalfields

Then beneath Southland soil is further staggering potential. A whopping amount of coal, for example, has been extracted, but much more remains. Reserves in the 35 square-mile Ohai fields are 5,965,000 tons (measured), 5,606,000 tons (indicated) and 4,140,000 tons (inferred), giving a total approaching 15 million tons — likely to prove conservative as new tools are applied to the job of meeting energy demands that by the year 2000 will be many times today's requirements.

Ohai's sub-bituminous coal, of low sulphur and ash content, will benefit from new coal-utilising plant and new processes. Possibilities are Ohai coal in briquettes and for industrial charcoal and carbon. Not all possibilities are confined to Ohai. In the Matura Valley from Gore to the sea is a huge lignite field, hardly tapped, with a measured 5,000,000 tons, indicated 20,000,000 tons, and inferred 152,000,000 tons that may eventually support a thermal power plant.

Variety of Minerals

Southland has not produced much other mineral wealth of note, but nothing is more certain than that a wide variety of minerals and stones known to be present will be exploited to varying extents, adding up to activity of considerable significance. The resources range from clays, asbestos greenstone or jade, mica, and marble to oil, copper, gold, silver, tin, awaruite, nickel, chromite and antimony. Prices are most often the key to development and to a large extent will dictate timing of work in some of the remote parts of the south.

Moke Creek Copper

A case in point is the renewed interest in the Moke Creek copper lode, discovered near Queenstown about 1862, but which excited little work at that time of difficult access and little technical advice. Now it is thought the lode may yield 6000 tons of copper worth \$7,000,000 or more, calculations based on quantity-estimates by the Department of Scientific and Industrial Research and analyses by the Electrolytic Refining and Smelting Company of Australia Ltd. The development company thinks there may be three times as much ore, which it plans to export through Bluff.

Greenstone Eldorado

At the other end of the scale is a greenstone Eldorado discovered right on a popular tourist route in the Wakatipu district. It was found by following-up Maori lore, in much the same way as the famed Te Ana-au glow-worm caves were found. Most exciting of all, though, is the search for oil that long ago brought about investigations as far apart as coastal Fiordland's Madagascar Beach where there are oil seepages, Western Southland's Orepuki where oil shale was worked, and Central Southland's Centre Bush where the first bore was put down 35 years ago and found several shows of oil.

Oil and Gas

Further wildcat activity in 1964-65 in Central Southland again revealed indications of oil and gas. In that, the Fairfax Basin, and the further west Waiau Basin, surveys have shown sizeable subsurface structures, the prerequisites for entrapment of oil. Millions of acres are covered by oil prospecting licences.

An American firm also has plans for off-shore drilling for oil in an area of 11,500 square miles around Stewart Island and an area of 500 square miles near Fiordland's Puysegur Point. A stimulus to mineral activity all around Fiordland will be the full permanent wharf facilities installed at Deep Cove for the Manapouri power scheme.

Power for Industry

The Manapouri scheme, first visualised at the turn of the century, is being developed primarily for its cheap power for industry and there is still other hydro-electric potential awaiting thorough investigation. It has been said that the potential of Lake Hauroko — to mention just one source — could well form the basis of another new industry in the region; the speaker was none other than the Hon. J. R. Hanan, who, as Attorney-General and M.P. for Invercargill, was prominent in action leading to the development of the Manapouri project.

Untapped Power

A station at Lake Poteriteri 70 miles from Invercargill would give about 27,000kw continuous power or 53,000kw 12 hours daily with a 2½-mile tunnel connecting Poteriteri and Lake Hauroko, which could be dammed to 60 feet to contain Wairaurahiri river flood water. A further tunnel 4½ miles or more long from Poteriteri to a station at Te Wae Wae Bay — just 51 miles from Invercargill — would give more than 33,000kw continuous or an average of 75,000kw on a 50 per cent load factor. Yet another alternative is to divert Lake Monowai by tunnel to Hauroko, Poteriteri and Te Wae Wae, eliminate the present Monowai power station and have a Te Wae Wae station producing about five times the Monowai power of today.

Taming the Rivers

Water elsewhere will be given the closest attention by the Southland Catchment Board, which, with a \$1,818,000 project in hand to tame the Makarewa

River, is embarking on a course that will mean several such giant works and change the appearance of the land far and wide. An indication of what is in the offing is given in calculations of the Makarewa scheme's eventual benefits, thus: flood relief to 10,500 acres, full use of 10,800 acres undeveloped and 12,000 acres semi-developed — a potential gross return of \$360,000 yearly from reduction in flood losses and from increased production.

That and the catchment work bringing hill and mountain sides into production is all part of the growing need to take maximum advantage of nature and in particular the water that has been described as a common denominator to human expectations.

River Estuary

Water, or more specifically the New River Estuary, is likely to be used to special advantage in Invercargill as well. A freshwater lake of 1000-plus acres is the prospect for the heart of the city. The waters of the Waihopai River and Otepun Stream would be held by a barrage carrying sewer and other Otatara mains, plus a further road connection with Otatara, which is expected to be amalgamated with the city in a few years.

Invercargill would be following Canberra, the capital of Australia, whose Sir Robert Menzies once said: All the world's most beautiful cities are built beside water.

Clear Destiny

Invercargill in other respects has a clear destiny. With a Bluff aluminium smelter based on Manapouri power, it would have a population of 100,000 by 1991. Without the smelter, the city population will still have risen to around 83,000 on current estimates. Invercargill could be, for all practical purposes, full to capacity within a decade and Otatara, next likely suburb, will become the main safety valve, able to take up to 30,000 people.

Motorways will sweep around the west and east of a cosmopolitan city . . . Invercargill Airport will have a new aspect . . . the city should have its teachers' training college and a university . . . Gore will be more than halfway to becoming the province's second city . . . Bluff's Harbour Island will have at least three further overseas berths if not an additional harbour . . . But everything everywhere will still be at the dawn and prospect should still be more exciting than retrospect.

MANAPOURI . . .

New Zealand's Largest

Hydro-electric Power Project

THE Manapouri hydro-electric project will divert the waters of Lake Manapouri through intakes and vertical penstocks to a powerhouse 700ft underground, at the West Arm of the lake.

The flow through the turbines, some 10ft below sea level, will discharge through draft tubes and a manifold into a concrete-lined tail-race tunnel, 30ft in diameter, under the mountains to the sea at Deep Cove, Doubtful Sound, six miles from West Arm.

Eventually the powerhouse will have seven Francis-type turbines, each driving a 100,000 Kw generator. Four machines will be installed for the initial stage now under way.

On the surface directly above the powerhouse will be a switch yard from which electricity will be transmitted overland to Invercargill. The lines will cross the mountain range on the south shore of West Arm, ascend the Grebe River valley, and thence run to Monowai and onwards to a substation of the National grid, or to the aluminium smelter site as required.

From Deep Cove a 14-mile road, up Lyvia River valley to Wilmot Pass (2000 ft) and down Dashwood Stream and Spey River valley, will be used to transport machinery and supplies from overseas and coastal ships berthing in Doubtful Sound to the West Arm spiral access tunnel descending to the power station.

The two major construction sites are at Deep Cove, Doubtful Sound, and at West Arm, Lake Manapouri.

Deep Cove

The contract for construction of the six-mile tail-race tunnel is being performed from Deep Cove by the Utah-Williamson-Burnett Joint Venture. It includes, building permanent wharf-unloading facilities to accommodate ships up to 13,500 gross tons, furnishing navigation aids in Doubtful Sound, providing seaplane-alighting facilities, and constructing the Wilmot Pass road.

Temporary construction facilities ashore at Deep Cove include a powerhouse, fuel-oil unloading facilities and tank storage, equipment workshop, explosives and detonator storage, concrete

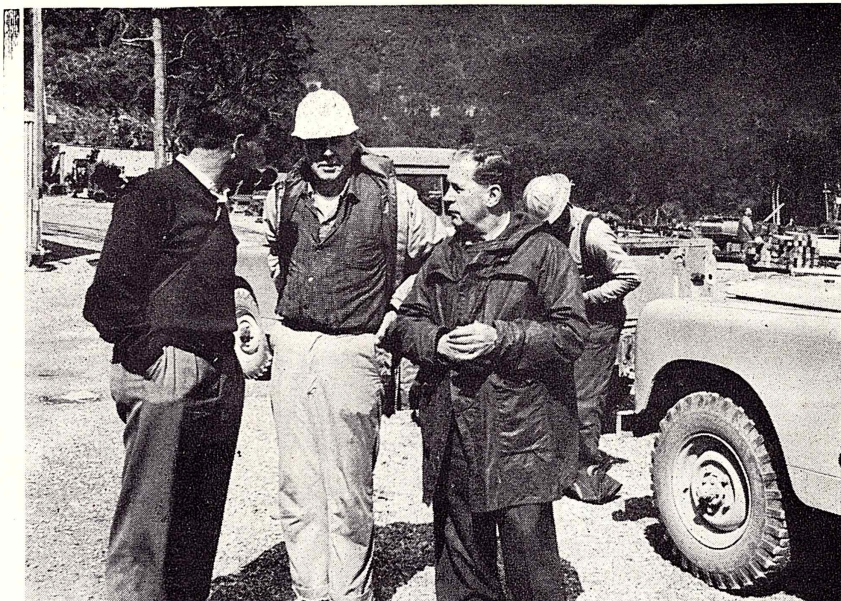


West Arm, Manapouri. From left to right — Messrs Alan Alsweiler, of Invercargill, secretary of the Southland Branch of the N.Z. Contractors' Federation; A. R. Tarr, of Wellington, general secretary of the Contractors' Federation; J. D. Devonport, project manager for the Utah-Williamson-Burnett contract at Deep Cove; E. Moen, managing director of Heavy Haulage Ltd, Invercargill, with senior personnel of the Utah-Williamson-Burnett contract and representatives of the Bachtel Corporation.

MANAPOURI



Mr E. Moen, left, chairman of the Southland branch of the Contractors' Federation, with Wellington contractor Mr J. E. Feast at the top of Wilmot Pass looking down on Doubtful Sound.



From left Messrs Moen, Devenport and Tarr discuss the progress at Manapouri.

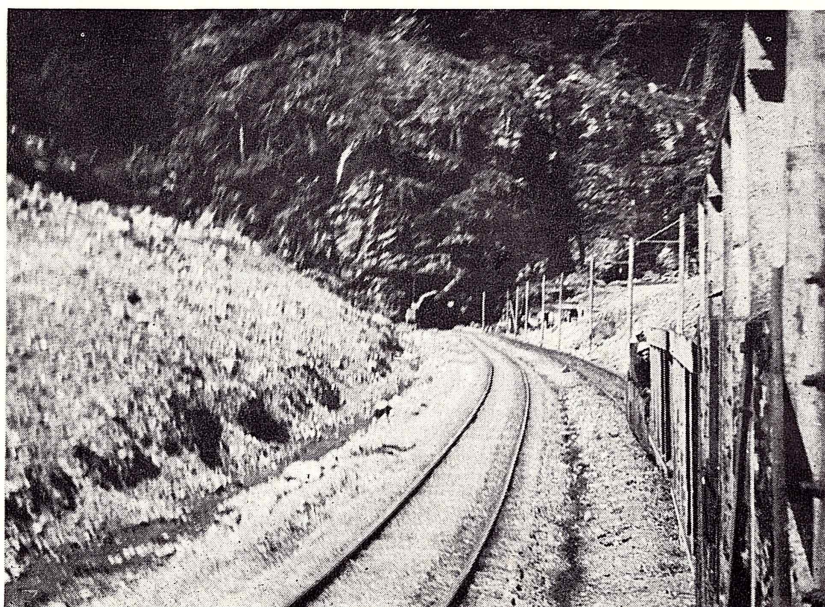
batching plant, and equipment-unloading and seaplane-mooring facilities.

The hostel is on board the former passenger liner Wanganella, which is temporarily moored off shore in Deep Cove but is to lie alongside a permanent wharf.

To be completed by 1st October, 1967, the tail-race tunnel will have a horse-shoe-shaped outlet. The outlet (portal) at Deep Cove will be constructed with its invert 50ft below sea level. At the deepest point, the tunnel invert will be

136ft below mean sea level.

For rock excavation in the tunnel the contractor is using a three-tiered "jumbo" drilling rig and to assist removal of spoil a steel sliding floor travels forward with the working face. The largest such device used anywhere, it carries all the railway track and switching equipment needed to service the tunnel heading. Rock, shattered by drilling and blasting, is cleared by strings of railway cars drawn by battery-electric locomotives.



ABOVE: Tunnel mouth at Deep Cove, Doubtful Sound.

West Arm

Major construction contracts at West Arm are: the access tunnel, awarded to the Morrison - Downer - Fletcher Joint Venture on 28th November, 1963; West Arm powerhouse and operators' village, to be awarded this year.

Morrison-Downer-Fletcher Joint Venture has begun the access tunnel, which spirals anti-clockwise from the surface on a 1-in-10 gradient to the powerhouse 700ft below ground level. The access tunnel will end at the foot of a vertical shaft next to the generator hall.

This vertical shaft was previously constructed to permit rock studies and core drilling in the underground powerhouse area. It will ultimately house a passenger elevator to carry powerhouse staff to and from duty.

Heavy powerhouse equipment, turbines, generators and transformers, brought from the unloading wharf at

Deep Cove over Wilmot Pass road and down the access tunnel, will be unloaded and erected by 150-ton powerhouse service cranes.

West Arm will also be serviced by a 20-mile water crossing from a loading dock on the eastern shore of Lake Manapouri.

An Invercargill builder, Mr P. Sheehan, has been awarded a contract worth £7500 for the construction of public amenities at West Arm, Lake Manapouri.

Announcing this recently, the Minister of Works, Mr Allen, said that provision for the public to visit the West Arm end of the Manapouri hydro-electric project was being planned in close collaboration with the Fiordland National Park Board whose staff had already put in an excellent effort in providing cleared picnic areas and a zig-zag nature walk to an observation point.

The contract covers construction of a lookout building, a lean-to picnic shelter, fireplaces, and complete toilet facilities. Later a jetty will be built for public use.

"Special care has been taken to make these facilities harmonise as much as possible with their magnificent natural surroundings," Mr Allen said. "The lookout building will be located a little over 100ft above lake level on the south shore of West Arm. It will have large landscape windows on three sides and will command a view straight across the lake to the power station site about half a mile away.

It is intended that the building house photographic displays, maps, drawings



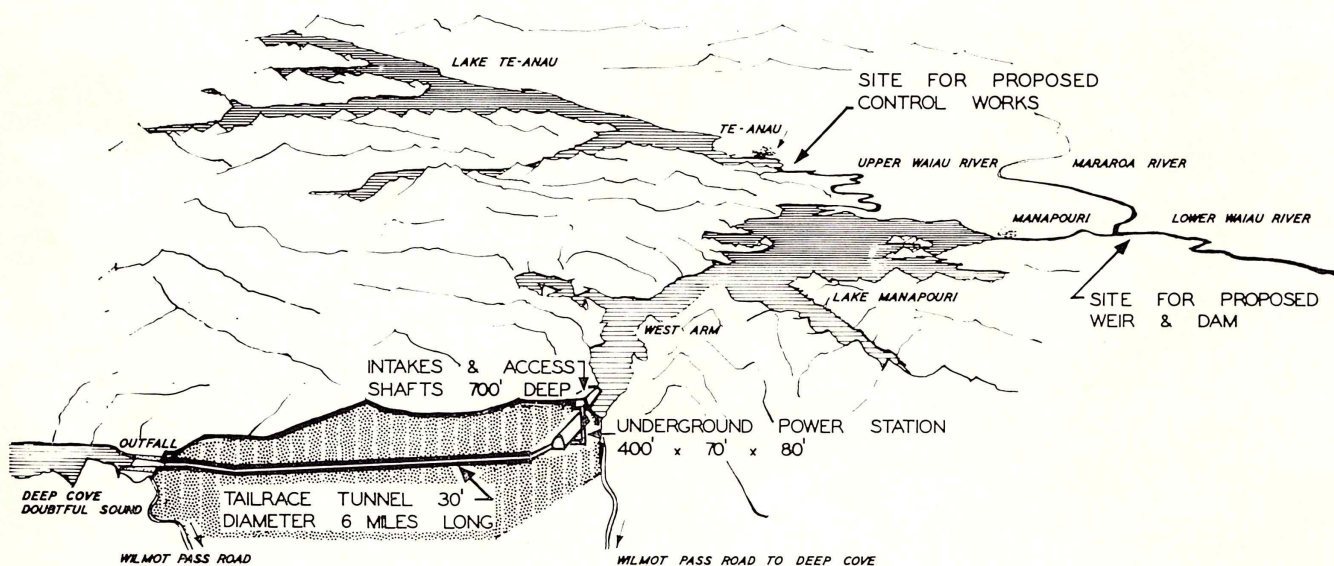
Drilling operations at tunnel face, Deep Cove.

and the like, and that visitors should be enabled to get a clear understanding of what is being done, as well as being able to use surface developments in perfect safety. As most of the work is underground considerable reliance will have to be placed on the static display material, and perhaps later on films to illustrate what is happening 700ft below the surface."

Mr Allen said the jetty, to be provided under a future contract, would lead off a pebbly beach to a large cleared

picnic area. The picnic shelter would be in two wings, with a very big central stone fireplace. Each wing would be about 28ft long, and there would be timber benches and tables.

To the south of this area a rustic bridge, from which one could enjoy a view of a most attractive waterfall, gave access to a smaller picnic area and to the zig-zag nature walk through wonderfully varied native bush up to the lookout point. Near the lookout building there was a spectacular mountain torrent.

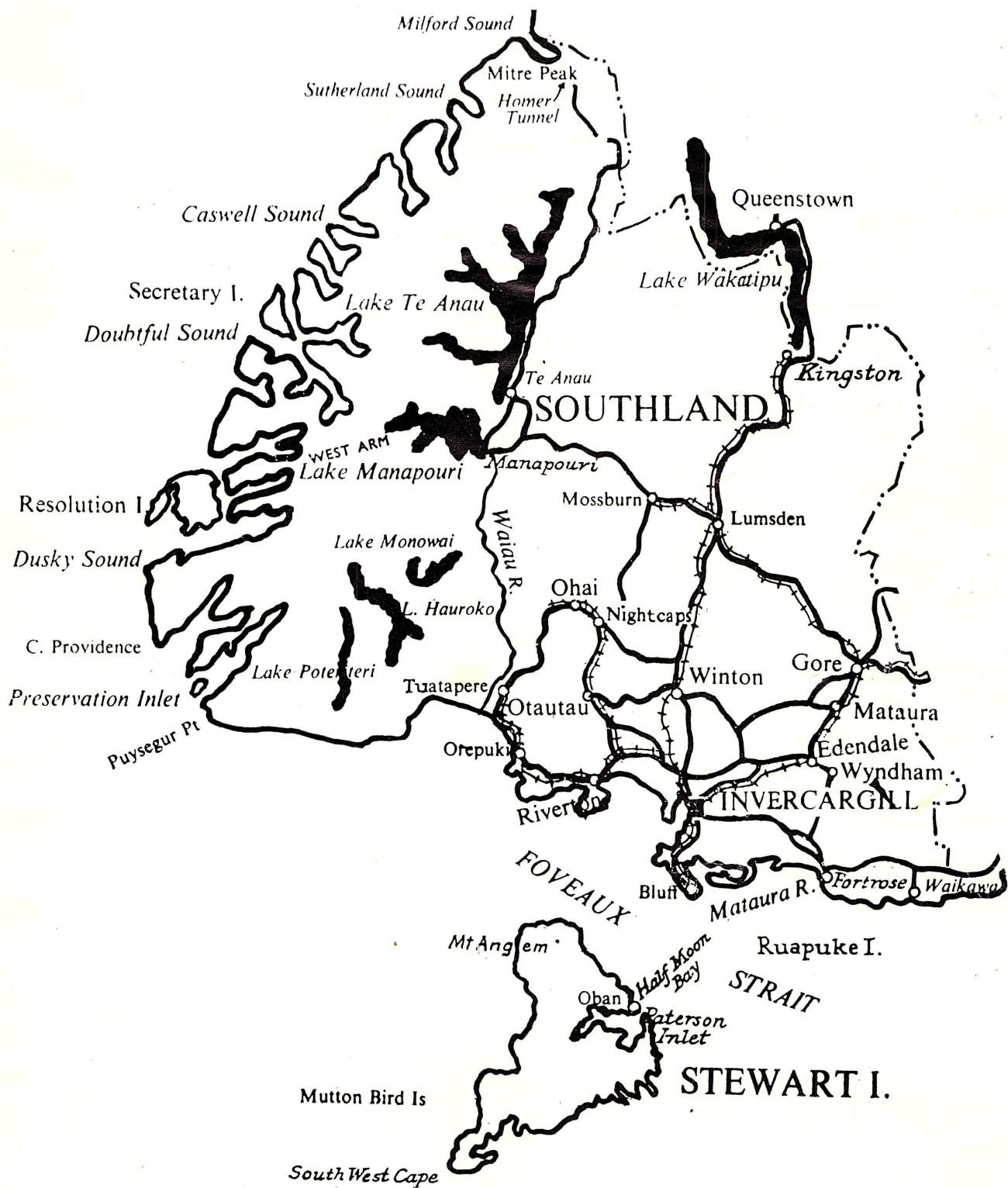


MANAPOURI POWER PROJECT PERSPECTIVE SKETCH

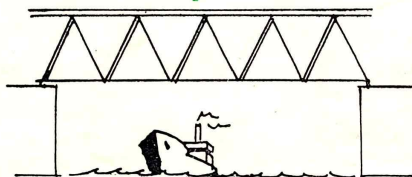
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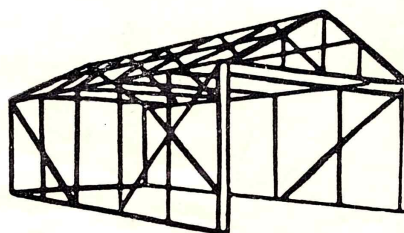


ALL from ONE FIRM . . .

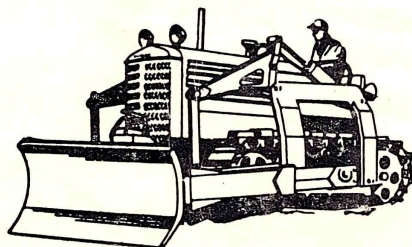


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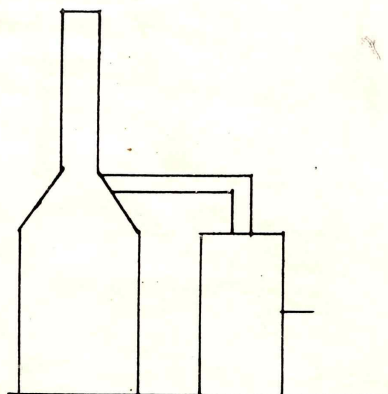


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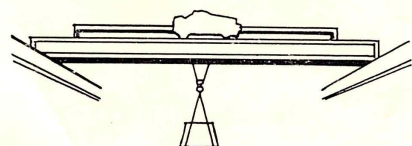


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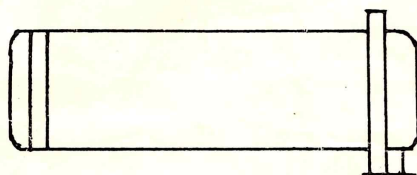


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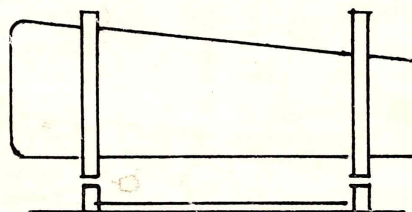


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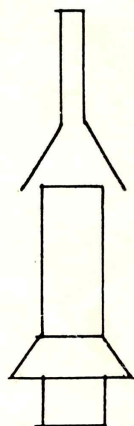
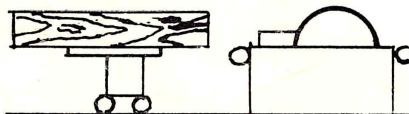


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